COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF AGRICULTURE

BULLETIN No. 269

TABULATED ANALYSES OF

Commercial Fertilizers

FROM SAMPLES SELECTED IN ACCORDANCE

WITH ACT OF MAY 1, 1909

BY THE

PENNSYLVANIA DEPARTMENT OF AGRICULTURE

From January 1 to August 1, 1915

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COMMONWEALTH OF PENNSYLVANIA.

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The Act of 1st May 1909, Commonly Referred to as "The New Fertilizer Law" is as Follows:

No. 205.

AN ACT

To regulate the manufacture and sale of commercial fertilizers; prescribing penalties for its violation, and repealing an act, entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one.

Section 1. Be it enacted, &c., That every package of commercial fertilizer sold, offered, or exposed for sale, for manurial purposes within this Commonwealth, except the dung of domestic animals, lime, marl, and wood-ashes, shall have plainly stamped thereon the name and address of the manufacturer or importer and his place of business, the net weight of the contents of the package, the brand or trade-name of the fertilizer the package contains, and an analysis stating the percentage such fertilizer contains of nitrogen in an available form, of potash soluble in water. of soluble and reverted phosphoric acid, and of insolu ble phosphoric acid.

Section 2. Every manufacturer or importer of commercial fertilizers, as specified in section one of this act, shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture a statement of the names and number of brands of such commercial fertilizers, having distinct trade-names, that he shall offer for sale during the next ensuing year, and a copy of the analysis of each one of such brands of commercial fertilizers, as required by section one of this act.

Section 3. In addition to the statement required by section two of this act, every manufacturer or importer of commercial fertilizers shall, on or before the first day of January of each year, or before offering them for sale in this Commonwealth, file annually with the Secretary of Agriculture an affidavit showing the amount of each brand of fertilizer, having a distinct trade-name, sold within the Commonwealth during the last preceding year; and if the said amount shall be one hundred tons or less, he or they shall pay or cause to be paid to the Secretary of Agriculture the

sum of fifteen dollars for each and every brand of such commercial fertilizer, having a distinct trade name sold within the State during the last preceding year: and if the said amount shall exceed one hundred tons, and be less than five hundred tons, he or they shall pay the sum of twenty dollars, as aforesaid; and if the said amount shall be five hundred tons or more, he or they shall pay the sum of thirty dollars, as aforesaid. If such manufacturer or manufacturers, importer or importers, shall not have made any sales within the Commonwealth during the preceding year, he or they shall pay the sum of fifteen dollars upon each such brand, as aforesaid: Provided, That all monies so received shall be immediately paid by the Secretary of Agriculture into the State Treasury, for the use of the Commonwealth.

Section 4. No person shall sell, offer, or expose for sale, in this State, any pulverized leather, hair, ground hoofs, horns, or wool waste, raw, steamed, roasted, or in any form, as a fertilizer, or as an ingredient of a fertilizer or manure, without an explicit statement of the fact; said statement to be conspicuously affixed to every package of such fertilizer or manure, and to accompany and go with every lot, parcel, or package of the same.

Section 5. Any person or persons selling, offering, or exposing for sale, any commercial fertilizer or any brand of the same, having a distinct trade-name, without the analysis required by section one of this act, or with an analysis stating that it contains a larger percentage of any one or more of the above-named constituents than is contained therein, or for the sale of which all the provisions of sections two and three have not been complied with, or any person violating any of the provisions of section four of this act, shall be guilty of a misdemeanor, and, on conviction, shall be sentenced to pay a fine of not less than twenty-five nor more than one hundred dollars for the first offense, and not less than two hundred dollars for each subsequent offense. It shall be the duty of the Secretary of Agriculture to enforce the provisions of this act, and all penalties, costs, and fines recovered shall be paid to him or his duly authorized agent, and by him shall be immediately paid into the State Treasury, for the use of the Commonwealth.

Section 6. The Secretary of Agriculture is hereby empowered to collect samples of commercial fertilizers, either in person or by his duly qualified agent or representative, and to have them analyzed, and to publish the results for the information of the public; and for this purpose the said Secretary of Agriculture, such assistants, agents, experts, chemists, detectives, and counsel as he shall duly authorize, shall have full access, ingress, and egress to and from all places of

business, factories, barns, buildings, carriages, cars, and vessels, used in the manufacture and transportation, or sale, of any commercial fertilizer. They shall also have power to open any package or vessel containing or supposed to contain any commercial fertilizer, and take therefrom samples for analysis, upon tendering the value of said samples.

Section 7. The term "commercial fertilizers," as used in this act, shall be construed to mean any and every substance imported, manufactured, prepared, or sold for fertilizing or manuring purposes, except the dung of domestic animals, marl, lime, and wood-ashes, and not exempt by the provisions of section one of this act.

Section 8. This act shall go into effect on and after the thirty-first day of July, one thousand nine hundred and nine; and the act, entitled "An act to regulate the manufacture and sale of commercial fertilizers; providing for its enforcement, and prescribing penalties for its violation," approved the twenty-fifth day of March, Anno Domini one thousand nine hundred and one, is hereby repealed.

Approved—The 1st day of May, A. D. 1909.

EDWIN S. STUART.

No. 95.

AN ACT

Making it unlawful for any person, firm, or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone; and providing a penalty for violation of the same.

Section 1. Be it enacted, &c., That it shall be unlawful for any person, firm or corporation, engaged in the manufacture or sale of commercial fertilizers, to use the word "bone" in connection with, or as part of the name of, any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fertilizer shall be the product of pure animal bone.

Section 2. Any person or persons violating the provisions of this act shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall pay a fine of fifty dollars for the first offense, and a fine of not less than one hundred dollars, nor more than two hundred dollars, for every subsequent offense; such fine or fines to be paid into the State Treasury, for the use of the Commonwealth. The Secretary of Agriculture shall, together with his deputies, agents, and assistants, be charged with the enforcement of this act.

Section 3. All magistrates, aldermen, and justices of the peace throughout this Commonwealth shall have jurisdiction to hear and determine actions arising from violations of the provisions of this act, and shall have authority to hold for court, or to impose the penalty hereby prescribed, subject to appeal, as the law shall direct.

Section 4. This act shall go into effect on the first day of January, Anno Domini nineteen hundred and ten.

Approved—The 23d day of April, A. D. 1909.

EDWIN S. STUART.

State College, Pa., *Aug. 9, 1915.*

Hon. N. B. Critchfield, *Secretary of Agriculture, Harrisburg, Pa.:*

Dear Sir: I have the honor to transmit herewith my report upon the analyses of the samples of commercial fertilizers received from official sampling agents during the spring season of 1915.

Very respectfully,

WM. FREAR,

Vice-Director and Chemist.

The Penna. State College Agricultural Experiment Station.

FERTILIZER VALUATIONS.

The object of an official valuation of commercial fertilizers is to enable the consumer to judge approximately whether he has been asked to pay for a given brand more than the fertilizing ingredients it contains and market conditions prevailing at the time would warrant. It is clear, therefore, that no attempt is made in this valuation to indicate whether the fertilizer valued possesses a greater or less crop-producing capacity than another fertilizer; but only whether it is higher priced than another of the same general composition.

For this purpose the valuation must be so computed as to include all the elements entering into the cost of a fertilizer as it is delivered to the consumer. These elements differ with the conditions of sale. Sales to consumers fall chiefly into two classes: (1) Those made directly from the jobber or manufacturer to the consumer, without the service of a local agent or dealer. Such sales are usually in relatively large lots for cash. (2) Those made through a local agent or dealer. These are most commonly made in relatively small lots and often with arrangements for deferred payments.

In some States, the valuations are so made as to represent sales only of the former class. In Pennsylvania, however, the principal volume of sales is of the second class, and the method of valuation has, therefore, included the additional cost elements involved in this mode of sale. The several cost elements or factors may conveniently be grouped as follows:

1. The wholesale cost of the ingredients.
2. The jobbers' gross profit on the sale of the ingredients; this includes office expenses, advertising, losses, etc.; for the purpose of the present computation it may be assumed that the sum of this gross profit and the wholesale cost of the ingredients, is equivalent to the retail price of the single ingredients near the wholesale markets in ton lots of original packages for cash.
3. The expense and profit of mixing: This item applies only to complete fertilizers, rock and potash, and ammoniated rock; not to dissolved or ground bone, or to dissolved rock.
4. The expense and profit of bagging.
5. Agents' commission: This item includes not only the commission proper, but every advance in price due to the sale of the goods through an agent in small quantities on time, rather than directly to the consumer in ton lots for cash.

6. Freight from the wholesale market to the point of delivery.

The valuations for 1915 are based:

1. Upon the wholesale prices from September 1, 1914, to March 1, 1915, of the raw materials used in fertilizer manufacture, the quotations of the New York market being adopted for all materials except acidulated phosphate rock and ground bone.

2. Upon an allowance of 20 per cent. of the wholesale prices, above mentioned, to cover jobbers' gross profit.

By adding the 20 per cent. allowed for jobbers' gross profit to the wholesale price of the several raw materials, the retail price in original packages at the jobbers' warehouse is obtained.

Since the amount of the several valuable fertilizing constituents in the various raw materials is known, it is a simple matter to determine the corresponding retail value per pound of the valuable fertilizing constituents yielded by each raw material. A schedule of these pound values affords a convenient basis of computation of the value per ton of various fertilizers, whose composition is ascertained by analysis.

The values assigned, for the present, to the other elements in the cost of the fertilizer at the point of delivery are:

3. For mixing, $1.00 per ton.

4. For bagging, $1.00 per ton, in all cases except those in which the article was sold in original packages; the cost of the package being, in such case, included in the wholesale price.

5. For agents' commission, 20 per cent. of the cost of the goods f. o. b. at the jobbers' or mixers' warehouse.

6. For freight, $2.00 per ton; the cost of the freight in lots of twelve tons or over, from the seaboard to Harrisburg, averaging $1.88 per ton.

The following valuation of dissolved South Carolina rock illustrates the method:

Phosphoric Acid.	%	Weight per ton.	
Available	14.00	280 lbs. at 3c,	$8.40
Insoluble,	1.00	20 lbs. at 1½c,	.30
Retail cash value of ingredients,			8.70
Bagging,			1.00
Cash value of goods ready for shipment,			9.70
Agents' commission, 20 per cent.,			1.94
Freight,			2.00
Commercial value per ton,			$13.64

It is not to be expected, of course, that the valuations thus computed will precisely represent the fair price to be charged for a brand in each locality and in every transaction. Market conditions,

competition, distance from factory, all introduce minor variations. Nevertheless, to make the approximation reasonably close the average valuation of a given class of goods ought to agree closely with its ascertained average selling price. Whenever such an agreement is no longer obtained by the use of a schedule, it is evident that the schedule of retail values of the constituents, or the added allowances for mixing, etc., requires revision.

It is needful to note here another factor greatly affecting the practical accuracy of these approximations. Their computation would offer little difficulty and their usefulness be far greater, if, by the ordinary methods of analysis, the exact nature of the ingredients used to supply the several fertilizer constituents, were capable of certain determination. This is, however, possible to-day to only a limited extent. The valuations are therefore based in general on the assumption that the fertilizers are uniformly compounded from high quality ingredients, such as are commonly employed in the manufacture of fertilizers of the several classes. Consumers should carefully avoid the error of accepting such valuations as infallible; they are not designed to be used for close comparisons of single brands, but only to indicate whether the price asked for a fertilizer is abnormal, assuming good quality for the ingredients used. From this it is clear that, *except as high freights may require, the selling price of a brand should not far exceed the valuation; but that a fertilizer may be made of inferior materials and yet have a high valuation.*

The valuations used during 1914 have been modified for use during 1915 in accordance with the changes in wholesale prices of fertilizing ingredients and to make the valuations more closely follow the selling price.

The following comparative statement shows the valuations and selling prices of the several classes of fertilizers during 1910 to 1914.

Fertilizers.	Number of samples.	Valuation.	Selling price.	Difference of valuation from selling price.
Spring, 1910.				
Complete,	436	26.36	25.26	1.37
Rock-and-potash,	123	16.08	17.16	—1.08
Dissolved bone,	8	21.47	22.17	—.70
Ground bone,	24	30.27	30.19	.08
Dissolved rock,	47	14.00	14.56	—.56
Fall, 1910.				
Complete,	294	22.24	21.76	.48
Rock-and-potash,	109	16.34	16.38	—.04
Dissolved bone,	4	25.70	25.80	—.10
Ground bone,	29	31.10	29.98	1.12
Dissolved rock,	32	14.15	14.01	.14

Fertilizers.	Number of samples.	Valuation.	Selling price.	Difference of valuation from selling price.
Spring, 1911.				
Complete,	485	25.95	24.97	.98
Rock-and-potash,	129	15.90	17.05	—1.06
Dissolved bone,	6	23.82	20.33	3.49
Ground bone,	23	31.47	30.93	.54
Dissolved rock,	51	14.86	15.83	.97
Fall, 1911.				
Complete,	292	22.33	21.73	.60
Rock-and-potash,	129	16.07	16.25	—.18
Dissolved bone,	3	21.51	24.88	—3.37
Ground bone,	25	31.18	31.17	.01
Dissolved rock,	42	13.78	14.00	.22
Spring, 1912.				
Complete,	470	27.24	27.64	.40
Rock-and-potash,	137	16.26	18.27	2.01
Dissolved bone,	4	18.92	20.94	2.02
Ground bone,	24	33.26	32.81	.55
Dissolved rock,	43	14.20	14.69	.49
Fall, 1912.				
Complete,	288	23.49	22.16	1.33
Rock-and-potash,	124	16.55	15.88	.67
Dissolved bone,	4	25.50	23.80	1.70
Ground bone,	28	34.84	30.55	4.29
Dissolved rock,	42	13.92	13.80	.12
Spring, 1913.				
Complete,	531	26.44	25.08	1.36
Rock-and-potash,	140	16.52	16.75	—.23
Dissolved bone,	4	21.63	18.55	3.08
Ground bone,	32	32.50	33.86	—1.36
Dissolved rock,	43	14.25	13.96	.29
Fall, 1913.				
Complete,	292	24.36	21.92	2.44
Rock-and-potash,	140	16.85	16.25	.60
Dissolved bone,	6	24.26	24.75	—.49
Ground bone,	36	32.63	31.12	1.51
Dissolved rock,	40	13.70	13.51	.19
Spring, 1914.				
Complete,	505	26.93	24.72	2.21
Rock-and-potash,	131	15.60	16.79	—1.19
Dissolved bone,	4	27.28	26.75	1.02
Ground bone,	23	30.15	31.43	—1.28
Dissolved rock,	30	13.71	14.48	—.77
Fall, 1914.				
Complete,	281	22.64	20.83	1.81
Rock-and-potash,	99	15.42	15.21	.21
Dissolved bone,	2	19.02	16.05	2.97
Ground bone,	23	33.45	32.20	1.25
Dissolved rock,	38	13.97	13.78	.19

In ammoniates such as dried blood and fish guano, the unit is of ammonia, of which 82.25 per cent is nitrogen; in acid phosphate the unit is of phosphoric acid (phosphorus pentoxid).

There has been a decided rise in the prices of some of the organic ammoniates, and of ammonium sulphate, and a decrease in the cost of nitrogen from nitrate of soda.

Phosphate rock and sulphuric acid show little change in prices compared with last year, but acid phosphate a considerable decrease.

Composition of Raw Materials.—In order to form a correct idea of the cost per pound of the fertilizer constituents of these materials, it is needful to determine their composition or, in other words, the quantities of valuable constituents each contains. The following table shows the composition of raw materials used in the manufacture of fertilizers. Few analyses of these materials, with the exception of ground bone and dissolved rock, have been made in Pennsylvania. The figures in the following table include the averages of the results of analyses made in Connecticut, New Jersey and Massachusetts during the past year, except in the case of ground bone and dissolved rock phosphates, where Pennsylvania results alone are included.

The following statement from the weekly reports of the Oil, Paint and Drug Reporter, of New York City, shows the average wholesale prices of fertilizer ingredients in the market, Sept. 1, 1914, to March 1, 1915:

Substance.	Amount Priced.	Average price Sept. 1, 1913 to March 1, 1914.	Average price Sept. 1, 1914 to March 1, 1915.	Prices Sept.-March, 1914-1915 in per cent. of prices of 1913-1914.
Sulphate of Ammonia,	Cwt.,	2.290	2.748	120.0
Nitrate of Soda,	Cwt.,	2.290	1.937	84.58
Dried Blood, H. G.,	Unit, (20 lbs.),	3.110	3.089	99.32
Concentrated Tankage,	Unit, (20 lbs.),	2.76	2.943	106.63
Rough Bone,	Ton,	29.25	23.25	100.00
Bone Meal,	Ton,	29.25	29.25	100.00
Fish Guano, dry,	Unit, (20 lbs.),	3.31	3.28	99.12
Phosphate Rock, Tenn.,	Ton,	5.25	5.25	100.00
Acid phosphate,	Unit, (20 lbs.),	.525	.475	90.47
Double manure salt,	Ton,	24.97	.....	.....
Sulphate of potash,	Ton,	47.156	.....	.....
Kainit,	Ton,	8.425	.....	.....
Muriate of potash,	Ton,	38.356	.....	.....
Sulphuric acid, 66°B,	Cwt.,	1.05	1.05	100.00

Composition of Non-Acidulated Fertilizer Ingredients, (Per Cent.)

Substance.	Number of samples analysed.	Nitrogen.	Potash.	Phosphoric acid.
Sulphate of ammonia,	3	20.53	.....	.....
Nitrate of soda,	39	15.30	.....	.....
Dried blood,	8	12.14	.....	.....
Ground bone,	35	2.92	.....	24.01
Tankage,	32	5.85	.....	11.44
Ground fish,	19	8.44	.....	6.69
Cottonseed meal,	224	6.90	.....	.....
Sulphate of potash,	10	.....	49.40	.....
Muriate of potash,	38	.....	50.49	.....
Kainit,	16	.....	13.55	.....
Double salt of kainit and,	3	.....	27.51	.....

Composition of Acidulated Fertilizer Ingredients. (Per Cent.)

	Number of samples.	Total phosphoric acid.	Insoluble phosphoric acid.	Nitrogen.
Dissolved bone,	6	14.54	3.88	1.88
Dissolved phosphate rock,	68	15.52	1.01	.....

Cost per Pound of Fertilizer Constituents.—With the composition of these raw materials and their price per ton, hundred weight, or other unit of measure as a basis, the wholesale cost per pound of the valuable constituents can readily be calculated. In many cases the ammoniates are quoted "per unit of ammonia," the term unit being equivalent to per cent.; in goods sold by the ton of 2,000 lbs., the unit is equal to 20 lbs., and 20 lbs. of ammonia contain 16.47 lbs. of nitrogen.

In the case of refuse bone-black, unacidulated, the mean, 28.25 per cent. of phosphoric acid, is assumed to represent the average material on the market.

Phosphate rock is sold by the ton of 2,240 lbs., and on the basis of the bone phosphate of lime it contains, with drawbacks for injurious constituents. Bone-phosphate of lime contains 45.8 per cent.

of phosphoric acid; therefore, each per cent. of bone phosphate in a long ton is equivalent to 22.4 lbs., and contains 10.26 lbs. of phosphoric acid.

In the wholesale trade, dried blood, azotine, concentrated tankage and hoof meals are usually sold on the basis of ammonia, disregarding the phosphoric acid present.

Insoluble phosphoric acid in dissolved rock is likewise omitted from consideration, contracts being based solely upon the "available" phosphoric acid; nor in rock phosphates is any claim made for the small quantities of nitrogen and potash they contain, nor in dissolved bone for the potash present.

Under these conditions, the wholesale cost per pound in New York of the valuable constituents of such materials as furnish but a single fertilizing element, these materials being assumed to be in the state of preparation and in the packing in which the manufacturer purchased them, are given in the following table; also a figure representing a fair retail price at the factory, the materials having undergone no change in treatment or packing and the allowance for expenses and profit in retailing being 20 per cent.

Wholesale Cost per Pound of Fertilizing Constituents, New York.

1. Ingredients Supplying One Constituent.

Materials.	Constituents Valued.	Wholesale price. Cents.	Wholesale price plus 20 per cent. Cents.
Sulphate of ammonia,	Nitrogen,	13.39	16.07
Nitrate of soda,	Nitrogen,	12.66	14.71
Dried blood,	Nitrogen,	18.84	22.61
Concentrated tankage,	Nitrogen,	17.95	21.54
Phosphate rock, Tenn., 78 per cent.,	Phosphoric acid, (total)*	.66	.79
Acid phosphate,	Phosphoric acid, available,	2.37	2.94

*The prices of phosphate rock are f. o. b. at the respective points of shipment, not New York. The prices for potash are taken from the schedule of the syndicate, and those of the remainder from the Oil, Paint and Drug Reporter.

The quotations for bone are given without specific reference to quality, so that it is impossible, from these data, fairly to apportion their several wholesale values to the nitrogen and phosphoric acid contained in this material. As compared with tankage, the general tendency is to assign a higher commercial rating to the phosphoric acid in bone, and to the nitrogen, a rating not very different from that given in tankage.

In former years, the value assigned to the bone nitrogen has been the same as that quoted on crushed tankage, c. a. f. Baltimore. In

later years, quotations for both crushed tankage and ground tankage have not been available, and for that reason, the value of bone nitrogen is based upon the quotations for concentrated tankage.

In earlier years, quotations on ground tankage have been about 5 per cent. in advance of those on concentrated tankage; also quotations on crushed tankage were on an average 12.67 per cent. in advance of those on ground tankage. Increasing the price of concentrated tankage by these percentages, we have $3.46 per unit of ammonia as the value assigned to the nitrogen in bone.

This is equivalent to $4.19 per unit of nitrogen.

The average composition of the ground bone and bone meal samples analyzed last year in Pennsylvania was: Phosphoric acid, 22.35 per cent.; nitrogen 3.24 per cent.

The prepared bone contains less fat and moisture, and often less nitrogen than the ordinary rough bone, but these differences tend, in a measure, to neutralize each other. Assuming for the rough bone quoted in the New York market the same composition as the bone meal sold in Pennsylvania, and for the value of the nitrogen $4.19 per unit, as previously stated, the values per pound of the several constituents would be:

Wholesale Cost per Pound of Fertilizer Constituents, New York.

II. Bone.

Materials.	Constituents Valued.	Wholesale price. Cents.	Wholesale price, plus 20 per cent.
Rough bone,	Nitrogen,	20.95	25.14
	Phosphoric acid,	3.17	2.60
Grouud bone,	Nitrogen,	20.95	25.14
	Phosphoric acid,	3.45	4.14

Valuation in Neighboring States.

It is desirable, from all points of view, that the schedules of valuation throughout a district in which similar market conditions prevail, should differ as little as possible. It has been our practice in the past, to conform our schedule to that adopted after very careful cooperative study of the market conditions for each year, by the New England States, New York and New Jersey, except where the peculiar conditions of our markets have been made the valuations

diverge too largely from the actual selling prices, as in the case of ground bone and dissolved rock phosphates. The schedules for these States for 1914 and 1915 are as follows:

Trade Values Adopted by the New England States and New Jersey.

	Cents per Pound.		Value in 1915 in per cent. of those in 1914.
	1914.	1915.	
Nitrogen:			
In nitrates,	16½	15	90.0
In ammonium salts,	16½	15½	93.9
In dry and fine ground fish and blood,	22½	22	97.7
In fine bone and tankage,	21½	21	97.6
In coarse bone and tankage,	17½	17	97.2
In mixed fertilizers,	19½	19	97.5
Phosphoric acid:			
Water soluble,	4½	4	88.9
Citrate soluble,	4	3½	87.5
In fine ground bone and tankage,	4	4	100.0
In coarse bone and tankage,	3½	3½	100.0
In mixed fertilizers, insoluble,	2	2	100.0
Potash:			
In forms free from muriate,	5	9½	190.0
As muriate,	4	8½	212.5

Valuations in Pennsylvania.

For reasons stated on the previous page, the New England schedule has been followed in the case of mixed fertilizers and dissolved bones.

In the case of the dissolved rocks, the wholesale prices of raw materials used in their manufacture and of the available phosphoric acid itself, having shown no material change, the values used in the Pennsylvania schedule for 1914 are continued for use during the present year.

With respect to the potash and nitrate salts, the experience of recent years has shown a growing increase in the proportion of the official samples that represent direct cash purchases in large quantities. The result has been that the commercial valuations, based upon the conditions and costs of sale in small quantities, through local agents and on time, came to be, in a large fraction of the cases represented by these salts whose analyses are reported in the miscellaneous group, strikingly higher than the selling prices quoted. *For this reason, it has appeared needful to proceed, hereafter, upon the assumption that all potash and nitrate salts sold unmixed as such, have been purchased at what are virtually jobbers' prices plus freight, and to adopt*

corresponding pound values. In the case, however, of potash and nitrogen in mixed fertilizers, the computation will be made as heretofore, upon the assumed basis of sale on time, in small quantities and through local dealers.

Buyers who are interested in the comparative jobbing prices of other materials, will find the data in the preceding pages.

The entire schedule adopted for use in this State is presented in the following table.

Pennsylvania Schedule of Values for Fertilizer Ingredients, 1915.

	Cents Per Pound.
Nitrogen:	
In ammonium salts,	15½
In nitrates,	15
In meat, dried blood, etc.,	22
In mixed fertilizers,	19
In fine ground bone and tankage,	17
In coarse bone and tankage,	15
Phosphoric acid:	
Available, in bone fertilizers,	3¾
Available in rock fertilizers,	2¾
Insoluble in amonium citrate, in bone fertilizers,	2
Insoluble in ammonium citrate, in rock fertilizers,	1
In fine bone, tankage and fish,	3½
In coarse bone and tankage,	2½
Potash:	
In high grade sulphate of other forms free from muriate,	9½
As muriate,	8½

FERTILIZERS ANALYSES JANUARY 1 TO AUGUST 1, 1915.

Since January 1, 1915, there have been received from authorized sampling agents one thousand six hundred fertilizer samples, of which six hundred and ten were subjected to analysis. Prefence was given to those which have not been recently analyzed. In cases where two or more samples representing the same brand were received, equal portions from several samples were united, and the composite sample was subjected to analysis.

The samples analyzed group themselves as follows: 422 complete fertilizers, furnishing phosphoric acid, potash and nitrogen; 9 dissolved bones, furnishing phosphoric acid and nitrogen; 86 rock-and potash fertilizers, furnishing phosphoric acid and potash; 48 acidulated rock phosphates, furnishing phosphoric acid only; 24 ground bones, furnishing phosphoric acid and nitrogen, and 21 miscellaneous samples, which group includes substances not properly classified under the foregoing heads.

The determinations to which a complete fertilizer is subjected are as follows: (1) Moisture, useful for the comparison of analyses, for indication of dry condition and fitness for drilling, and also of the conditions under which the fertilizer was kept in the warehouse. (2) Phosphoric acid—total and insoluble; the latter is, that portion not soluble in water nor in warm ammonium citrate solution (a solution supposed to represent the action of plant roots upon the fertilizer), which is assumed to have little immediate food value. By difference, it is easy to compute the so-called "available" phosphoric acid. (3) Potash soluble in water—most of that present in green sand marl and crushed minerals, and even some of that present in vegetable materials such as cotton-seed meal, not being included because insoluble in water even after long boiling. (4) Nitrogen—This element is determined in such manner as to ascertain its *total* quantity and also, the quality of the organic nitrogenous material present in the finished fertilizer. The fertilizer is washed thoroughly with water, which removes the nitrates, ammonium salts and almost all of the cyanamid nitrogen, and the soluble organic nitrogenous materials. These are not separately determined but are grouped under the name *"water-soluble nitrogen."* The quantity of *water-insoluble nitrogen* is directly determined, and by difference between its amount and the total nitrogen, the water-soluble nitrogen is calculated. Another portion of water-insoluble material* is treated with alkaline potassium permanganate, which attacks the nitrogenous organic substances present, and converts the more active portion into ammonia, which is distilled off, determined, and its nitrogen calculated as *"active insoluble nitrogen."* The *"inactive insoluble nitrogen"* is then computed by subtracting the active insoluble from the total insoluble nitrogen. The term "available nitrogen" as used in this report, is the sum of the water-soluble and the active insoluble nitrogen. It is equivalent to the total nitrogen less the inactive insoluble nitrogen. In high grade organic nitrogenous materials, among which, from its behavior with this treatment, must be included horn meal, the percentage of inactive nitrogen in the insoluble nitrogen is usually under 40 per cent; and the ratio of inactive to active insoluble nitrogen in such materials is usually less than 60:100. On the other hand, in the case of low-grade nitrogenous materials, the proportions of inactive nitrogen are much higher. The separations effected by these methods are therefore of great value in distinguishing whether the insoluble nitrogen is derived from high grade materials, or from low grade substances such as garbage tankage, peat, mora meal, unacidulated hair, leather, etc. There is, however, one fertilizer ingredient rapidly coming into use, whose presence may lead to erroneous conclusion, if judgment is based

*This determination has been omitted in all cases where the insoluble nitrogen is only .2 per cent. or less.

solely upon the facts ascertained by the foregoing method, namely, cyanamid. This substance contains from 13 to 16.5 per cent. of nitrogen, of which 12 to 14.7 per cent. is soluble in water, by the mode of treatment used in the alkaline permanganate method; and, of the 1.0 to 1.7 per cent. of water-insoluble nitrogen, less than one-fifth is active; so that the ratio of inactive to insoluble nitrogen is about 80:100. Owing to its tendency to reduce the availability of the phosphoric acid in acid phosphate mixtures, limited quantities only of this ingredient can be used advantageously in mixed fertilizers. Nevertheless, in cases where low grade sources of nitrogen are indicated by the foregoing method, it would be needful to determine, by supplementary tests, whether or not cynamid may be present to account for an undue proportion of inactive, insoluble nitrogen, before concluding that such excess of inactive nitrogenous material is attributable to low-grade nitrogenous constituents. It is desirable to keep in mind at this point the fact also that certain widely used low-grade nitrogenous substances, such as garbage tankage, peat and mora meal, are not included in the list of substances whose presence requires specific declaration under Section 4 of the Fertilizer act. (5)Chlorin—this determination is made to afford a basis for estimating the proportion of the potash that is present as chlorid or muriate, the cheaper source. The computation is made on the assumption that the chlorin present, unless in excess, has been introduced in the form of muriate of potash; but doubtless there are occasional exceptions to this rule. One part of chlorin combines with 1.326 parts of potash to form the pure muriate; knowing the chlorin, it is, therefore, easy to compute the potash equivalent thereto. (7) In the case of ground bone, the state of sub-division is determined by sifting through accurately made sieves; the cost of preparation and especially the promptness of action of bone in the soil depend very largely on the fineness of its particles, the finer being much more quickly useful to the plant.

The legislation of 1909 has made needful some additional tests. Section 4, of the Act of May 1, 1909, prohibits the sale of "pulverized leather, hair, ground hoof, horns, or wool waste, raw, steamed, roasted, or in any form, as a fertilizer, or as an ingredient of a fertilizer or manure, without an explicit statement of the fact." All nitrogenous fertilizers have, therefore, been submitted to a careful microscopic examination, at the time of preparing the sample for analysis, to detect the presence of the tissues characteristic of the several materials above named.

The act of April 23, 1909, makes it unlawful to use the word "bone" in connection with, or as part of the name of any fertilizer, or any brand of the same, unless the phosphoric acid contained in such fer-

tilizer shall be the product of pure animal bone. All fertilizers in whose name the word "bone" appears, were therefore examined by microscopic and chemical methods to determine, so far as possible with present knowledge, the nature of the ingredient or ingredients supplying the phosphoric acid. It is a fact, however, well known to fertilizer manufacturers and which should be equally understood by the consumer, that it is, in certain cases, practically impossible to determine the source of the phosphoric acid by an examination of the finished fertilizer. The microscope shows clearly the structure of raw bone, but does not make it possible to discriminate between thoroughly acidulated bone and acidulated rock. The ratio of nitrogen to phosphoric acid in a raw bone—and only such bone as has not been deprived of any considerable proportion of its nitrogenous material by some manufacturing process can properly be called "pure animal bone"—is about 1:8, in cases where the ratio of phosphoric acid to nitrogen exceeds 8, it is clear that part, at least, of the phosphoric acid has been supplied by something else than pure animal bone; but, inasmuch as nitrogen may have been introduced in some material other than bone and no longer detectible by the microscope, the presence of nitrogen and phosphoric acid in the proportions corresponding to those of bone is not proof positive that they have been supplied by bone. Finally, the differences in the iron and silica content of bone and rock respectively, afford means of distinction useful in some cases; the usefulness of this distinction is limited, however, by the facts that kitchen bone frequently contains earthy impurities rich in iron and silica, and that earthy fillers can legally be used in fertilizers and are in fact considerably used therein both as "make-weights" and as "conditioners," or materials introduced to improve the drilling qualities of the goods. The fact that the phosphoric acid in bone and rock are identical in character is probably so well known as to require no detailed consideration in this connection.

The law having required the manufacturer to guarantee the amount of certain valuable ingredients present in any brand he may put upon the market, chemical analysis is employed to verify the guaranties stamped upon the fertilizer sacks. It has, therefore, been deemed desirable in this report to enter the guaranty filed by the manufacturer in the office of the Secretary of Agriculture, in such connection with the analytical results that the two may be compared. An unfortunate practice has grown up among manufacturers of so wording the guaranty that it seems to declare the presence in the goods of an amount of valuable constituent ranging from a certain minimum to a much higher maximum; thus, "Potash, 2 to 4 per cent." is a guaranty not infrequently given. In reality, the sole guaranty is for

2 per cent. The guaranteed amounts given for each brand in the following tables, are copied from the guaranties filed by the maker of the goods with the Secretary of Agriculture, the lowest figure given for any constituent being considered to be the amount guaranteed. For compactness and because no essentially important fact is suppressed thereby, the guaranties for soluble and reverted phosphoric acid have not been given separately, but are combined into a single guaranty for available phosphoric acid; in cases where the maker's guaranty does not specifically mention available phosphoric acid, the sum of the lowest figures given by him for soluble and reverted phosphoric acid is used. The law of 1879 allowed the maker to express his guaranty for nitrogen either in terms of that element or in terms of the ammonia equivalent thereto; since ammonia is composed of three parts of hydrogen and fourteen parts of nitrogen, it is a very simple matter to calculate the amount of one, when the amount of the other is given; the amount of nitrogen multiplied by 1.214 will give the corresponding amount of ammonia, and the amount of ammonia multiplied by 0.824 will give the corresponding amount of nitrogen. In these tables, the expression is in terms of nitrogen. The laws of 1901 and 1909 abolished the alternative and required that the quantity shall be given in terms of nitrogen.

Many manufacturers, after complying with the terms of the law, insert additional items in their guaranties, often with the result of misleading or confusing the buyer; the latter will do well to give heed to those items only that are given as the law requires and that are presented in these tables:

Summary of Analyses Made this Season.

	Complete fertilizers.	Rock and potash.	Dissolved bone.	Dissolved rock.	Ground bone.
Number of analyses,	422	86	9	48	24
Moisture, per cent.,	7.89	8.06	5.91	7.99	3.52
Phosphoric acid:					
Total, per cent.,	10.56	12.35	12.35	16.87	21.46
Available, per cent.,	9.05	11.29	9.74	15.84	.....
Insoluble, per cent.,	1.51	1.06	2.61	1.03	.....
Potash, per cent.,	3.05	2.16	.....	.....	.....
Nitrogen, per cent.,	1.95	.....	2.01	.....	2.96
Mechanical analyses of bone:					
Fine,	.....	.....	.....	.....	53
Coarse,	.....	.....	.....	.....	47
Commercial valuation,*	28.45	16.47	24.30	13.97	30.26
Average selling price,*	25.50	16.90	24.69	14.00	33.44

*Dollars per ton.

The average selling prices for the several classes of fertilizers as compared with the corresponding commercial valuations, show several interesting discrepancies between these items. In case of the complete fertilizers, the average selling price is $2.95 lower than the valuation. The valuation was raised chiefly with respect to potash, which had been extensively quoted in January and February of this year at rates corresponding to 8½ to 9½ cents a pound, according to source. For 61 pounds of potash present in the fertilizer, this quotation represents an increase over 1914 values of $2.59. If the potash in complete fertilizers is being sold at 1914 values, the difference between valuation and selling price here noted would be accounted for. In the case of rock and potash brands, such condition does not appear.

In the case of ground bones, the average selling price is $3.18 a ton higher than the valuation. This price movement was not at all indicated by either the New York wholesale prices up to March 1st, 1915, nor by the New England and New Jersey quotations of about that date.

"For the purpose of indicating more specifically to the eye, cases deficient from guaranty, an asterisk has been affixed in the analytical tables where the ingredient has been found less in quantity than the manufacturer guaranteed. Too great emphasis should not be placed upon very slight deficiencies, because very slight imperfections in mixing and slight variation in analysis are practically unavoidable. The asterisk has been used, therefore, only in cases where the deficiencies amount to 0.2 per cent. or more, except where nitrogen has been guaranteed in amounts no higher than 1.0 per cent., in which case an asterisk has been affixed where the deficiency amounts to 0.1 per cent. or more."

The cases of departure of goods from their guaranteed composition observed this season, including only those cases in which it amounted to 2-10 per cent. or more were as follows:

Summary of Instances of Deficiency from Guaranty.

	Complete fertilizers.	Rock and potash.	Dissolved bone.	Dissolved rock.	Ground bone.
Deficient in four constituents,	0	0	0	0	0
Deficient in three constituents,	2	0	0	0	0
Deficient in two constituents,	23	4	0	1	0
Deficient in one constituent,	65	8	3	6	3
Total number of samples in which deficiencies occur,	90	12	3	7	3

The cases of deficiency noted during the past nine seasons in the composition of goods as compared with their guaranties, expressed in percentage of the total number of goods of each class analyzed, are as follows:

Percentage of Deficiency, 1910-1915.

	Spring, 1910.	Fall, 1910.	Spring, 1911.	Fall, 1911.	Spring, 1912.	Spring, 1913.	Fall, 1913.	Spring, 1914.	Fall, 1914.	Spring, 1915.
Complete fertilizers, ...	28.9	35.9	45.1	46.9	39.0	32.3	46.0	33.1	27.1	21.3
Dissolved bone, ...	37.5	25.0	16.6	100.00	50.0	50.0	66.7	50.0	0.0	33.3
Rock and potash, ...	25.2	37.0	27.1	43.4	33.6	26.4	46.0	26.7	35.8	14.0
Dissolved rock, ...	4.3	6.3	5.9	11.9	12.5	20.9	22.5	23.3	18.9	14.7
Ground bone, ...	29.17	27.6	47.8	20.0	29.2	25.0	22.2	47.8	31.8	12.5
All classes except miscellaneous, ...	26.5	33.5	38.7	46.0	36.0	30.4	35.0	32.0	28.0	19.6

The work of this season shows an unusually excellent conformity of composition to guarranty,

A comparison of the average composition of all samples of complete fertilizers for which guaranties are recorded with the average of the corresponding guaranties, for several seasons past, including those of this season, follows:

Average Composition and Guaranty Compared.

	Average composition. Per cent.	Average composition. Per cent.
Spring, 1909.		
Phosphoric acid,		
Total, ...	9.83	8.98
Available, ...	8.07	7.66
Potash, ...	5.07	4.89
Nitrogen, ...	1.67	1.60
Fall, 1909.		
Phosphoric acid:		
Total, ...	10.13	9.34
Available, ...	8.27	8.08
Potash, ...	3.41	3.12
Nitrogen, ...	1.33	1.26
Spring, 1910.		
Phosphoric acid:		
Total, ...	9.80	8.80
Available, ...	8.26	7.62
Potash, ...	5.20	4.68
Nitrogen, ...	1.63	1.60

	Average guaranty. Per cent.	Average guaranty. Per cent.
Fall, 1910.		
Phosphoric acid:		
Total,	9.72	8.80
Available,	8.26	7.62
Potash,	5.20	4.68
Nitrogen,	1.63	1.60
Spring, 1911.		
Phosphoric acid:		
Total,	9.86	8.96
Available,	8.31	7.86
Potash,	4.97	4.65
Nitrogen,	1.53	1.54
Fall, 1911.		
Phosphoric acid:		
Total,	9.59	9.09
Available,	8.20	7.87
Potash,	3.63	3.39
Nitrogen,	1.12	1.19
Spring, 1912.		
Phosphoric acid:		
Total,	9.51	8.82
Available,	8.09	7.78
Potash,	5.34	5.05
Nitrogen,	1.56	1.58
Fall, 1912.		
Phosphoric acid:		
Total,	9.90	9.07
Available,	8.28	7.83
Potash,	4.06	3.57
Nitrogen,	1.28	1.30
Spring, 1913.		
Phosphoric acid:		
Total,	9.71	8.92
Available,	8.11	7.37
Potash,	5.41	5.17
Nitrogen,	1.61	1.62
Fall, 1913.		
Phosphoric acid:		
Total,	9.86	9.09
Available,	8.06	7.83
Potash,	4.28	4.27
Nitrogen,	1.47	1.35
Spring, 1914.		
Phosphoric acid:		
Total,	9.31	8.71
Available,	8.06	7.65
Potash,	5.67	5.52
Nitrogen,	1.81	1.69
Fall, 1914.		
Phosphoric acid:		
Total,	9.84	9.25
Available,	8.41	8.00
Potash,	3.42	2.99
Nitrogen,	1.29	1.27
Spring, 1915.		
Phosphoric acid:		
Total,	10.56	9.34
Available,	9.05	8.00
Potash,	3.05	3.12
Nitrogen,	1.95	1.82

MATERIALS USED IN FERTILIZERS.

The sampling agents report no case of declaration under the requirements of Section 4 of the fertilizer law, nor has microscopic examination shown any decisive evidence of the presence in any fertilizer of more than accidental traces of any of the substances specified in that section.

On the other hand, the results of the examination of the condition of the nitrogen in the complete fertilizers by the alkaline permanganate method affords much that is suggestive.

To keep the tables down to convenient size, the percentages of active insoluble nitrogen found have been omitted. They can be computed, however, from the figures given, by deducting from the total nitrogen the sum of the soluble and the inactive insoluble nitrogen. The ratio which the active insoluble bears to the inactive insoluble nitrogen being the principal indication the method as here used gives respecting the character of the organic nitrogenous ingredients of the fertilizer, the index letters, 'a', 'b', and 'c' (or equivalent characters) have been affixed to the percentages of inactive insoluble nitrogen, to indicate the ratios between the active and inactive insoluble in the several samples. Cases in which the active constitutes three-fifths or more of the insoluble are marked 'a'; two-fifths to three-fifths, 'b', and less than two-fifths, 'c.' The New England Stations use the terms 'good,' 'doubtful' and 'poor' for these respective classes of cases.

Of the 276 samples examined this season, 62 belong to class 'a,' 192 to 'b,' and 22 to 'c.'

It is needful to keep clearly in mind the meaning of the index 'c' as thus applied. Its presence does not suffice to indicate that the fertilizer contains no readily available nitrogen, but merely that part or all of the insoluble nitrogen is derived from low-grade sources, barring cases in which cyanamid is one of the fertilizer ingredients. These low-grade materials may be such as are listed in Section 4 of the law, or others in common use, such as garbage tankage, peat or mora meal; and they may, if of animal origin, have had their nitrogenous materials changed almost entirely to an available condition by 'wet mixing,' which has, however, little improving effect upon the nitrogenous constituents of garbage tankage and mora meal, and little more upon those of peat.

The use of such low-grade materials is either to make the fertilizer less likely to become sticky or lumpy, or to supply nitrogen from

materials that would otherwise be wholly thrown to waste. The use of 'conditioners' for the former purpose is, in itself, desirable rather than objectionable; but becomes obnoxious and unjust when the nitrogen they contain in unavailable form is made the basis of a charge at high rates to the buyer. The use also of low-grade and therefore cheap nitrogen supplies whose nitrogen has, by chemical treatment, been made useful for plant-food, is laudable provided the materials are sold for what they are.

In cases where the inactive insoluble nitrogen forms a large fraction of the total nitrogen, is marked by the index 'c,' the guaranty does not exceed the available nitrogen by an amount equal to most of the 'inactive,' and the selling price, corrected for freight difference, is not considerably less than that asked for fertilizers of like general composition but supplying nitrogen derived from high-grade goods such as bear the index 'a' or even 'b,' there is reason to believe that the buyer is being subjected to unfair treatment.

Section 1 of the Fertilizer Law of 1909 requires that the guaranty for a fertilizer shall state 'the percentage such fertilizer contains of nitrogen in an available form.' It is, however, by no means clear that the term 'available,' as used in the law, means precisely the same thing that is meant by that term when used to designate the sum of the water-soluble and active insoluble nitrogen, as determined by the present method. For some nitrogenous fertilizer ingredients always regarded as of high grade, such as dried blood, meat tankage, and cottonseed meal, contain considerable fractions of inactive insoluble nitrogen when examined by this method. Until further notice, therefore, the law will not be construed to require that the amount of nitrogen guaranteed shall not exceed that present in a form that will appear as 'available' by the alkaline permanganate method now in use.

In many of this season's samples, however, the quantity of nitrogen thus available is found equal to the percentage guaranteed. On the average, the 'available' nitrogen found was 1.59 per cent. the total 1.95, that guaranteed, 1.82 per cent.

ORGANIZATION OF THE WORK.

The work of the season has been performed under my direction as follows:

The nitrogen determinations by Walter Thomas, B. S., and Ralph C. Bathgate, B. S.; the total phosphoric acid, by F. J. Holben, B. S.; the insoluble phosphoric acid and moisture, by H. D. Edmiston

and D. H. Bredt, B. S.; the potash, by E. S. Erb, M. S.; the chlorin, by Chas. Kern; the computations, by M. Verna Bryce and others. G. C. Given, Ph. D., had charge of the reception and preparation of the samples, and immediate supervision of the analytical work. To all of these assistants the writer is indebted for loyal aid.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	ALLENTOWN MANUFACTURING CO., ALLENTOWN, PA.		
2612	Special Complete Phosphate,	Geo. Balliet, Sweitzer,	8.44
	AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK.		
2681	Allens Special Potato & Truck Manure,	Harvey Detweiler, Chester Springs,	10.70
2817	†Bradley's Special B. D. Guano,	Smith & McKelvey, Blairsville,	7.39
2307		Athens Milling Co., Athens,	
2885		The Eli Zell Co., Greensburg,	
3341	†Bradley's Eclipse Phosphate,	Geo. R. Andrews, Enon Valley,	9.01
3008		Thos. McClain, Bellevernou, R. No. 2	
3428		A. L. Miller, Edela,	
2920	Bradley's Excelsior Compound,	F. H. Rentschler, Shartelsville,	9.52
2526	Bradley's Half Century Fertilizer,	E. G. Kelts, Knoxville,	10.30
3246	†Bradley's New Method Fertilizer,	Jas. Robbins, Benton,	7.69
3277		Wysox Coal & Hay Co., Wysox,	
2292	Bradley's Unicorn,	J. V. Lawrence, Nichols,	8.26
3284	Bradley's Vegetable Fertilizer,	R. W. Beardslee, Little Meadows,	9.19
3170	Canton Chemical Eagle Phosphate,	A. H. Keeley & Sons, Schwencksville.	9.51
2573	†Cantou Chemical Special Potato and Vegetable Manure.	H. F. Gump & Son, Everett,	7.24
2487		Geo. S. Chalfant, Milton,	
3013		King Bros., Uniontown,	
3146	Canton Chemical Special Resurgam Guano,	Jno. B. Buckmau, Newton,	8.55
3363		Marion H'd'ware Co., Marion,	
2574	†Canton Chemical Baker's Special Wheat, Corn and Grass Mixture.	H. F. Gump & Son, Everett,	7.51
2811		C. H. Neefe, Coudersport,	
2028	Special Complete Manure for Top Dressing	Harry Keefer, Pine Grove,	13.70
3145		John R. Buckman, Newtown,	
3052	Crocker's Ammoniated Super Phosphate,	F. H. Sheuberger, Red Lion, R. D. No. 1.	8.48
2057	Crocker's Special Auchor Brand,	T. R. Bolton, Cochranton,	7.49
2056	†Crocker's Special Complete Manure,	T. R. Bolton, Cochranton,	8.16
2022		Jas. Herb, Pitman, R. D.,	
2310		Farmer's Supply Co., Milan,	
2024	Crocker's Special Colonial Fertilizer,	Jas. Herb, Pitman, R. D.,	9.14
2809	†Crocker's General Crop Fertilizer,	W. C. White, Coudersport,	5.56
2090		Union City Coal and Supply Co., Union City.	
2827		S. T. & I. W. Gibson, Indiana,	
2309	Crocker's Harvest Jewel Fertilizer,	Farmers' Supply Co., Milan,	8.01
2868	Crocker's Potato, Hop & Tobacco Fertilizer,	W. C. White, Coudersport,	7.16
2922	†Crocker's Universal Grain Grower,	Houck & Henry, New Berlinville,	8.16
2797		W. B. Leete, Ulysses,	
3354		Hartwell & Philips, New Wilmington.	
3342	Crocker's Wheat & Corn Fertilizer,	J. E. Watters, Jamestown,	5.68
2728	†East India Economizer Phosphate,	Theodore Gerhart, Gilberts,	7.05
3081		John & Bitler, Catawissa, R. D.,	
3064	East India Special Garden and Farm Manure.	C. M. Honeywell, Dallas,	8.72
2730	East India Hawk Eye Fertilizer,	Theodore Gerhart, Gilberts,	9.56
3202	East India Unexcelled Fertilizer,	Jacob Heck's Sons, Kress,	10.32
2082	†Great Eastern Revised General,	Alcorn & Poole, Titusville,	7.19
2887		H. F. Fausnoll, Mt. Pleasant,	
2143	Great Eastern Revised Northern Corn Special.	Wm. J. Johnston, Sinking Spring,	5.11
2910	Great Eastern Special Crop Fertilizer,	Wm. J. Johnston, Sinking Spring,	7.96
2081	Great Eastern Vegetable, Vine and To-	Alcorn Poole, Titusville,	6.97
2144	†bacco Fertilizer.	Wm. J. Johnston, Sinking Spring,	
2776		Nickles & Stewart, Shippensburg,	
2634	†Detrick's Corn and Oats Fertilizer,	Levi Berkey, Somerset,	7.01
2890		W. S. Leeper, Mt. Pleasant,	
3166		Mowry-Latshaw H'd'w. Co., Spring City.	
2892	†Detrick's Kangaroo Komplete Kompound,	W. S. Leeper, Mt. Pleasant,	9.38
3261		Eli Yost, McEwensville,	
2845		Newton Gonder, Bosswell,	
2633	†Detrick's Special Standard Potash Fertilizer.	Levi Berkey, Somerset,	9.12
2891		W. S. Leeper, Mt. Pleasant,	

†Composite Sample.
*Constituents falls below guarauty.

FERTILIZERS.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs., at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as Muriate.	Present as Sulphate.	Found.	Guaranteed.	Water Soluble.	Available.	Inactive Insoluble.	Found.	Guaranteed.		
5.15	5.00	5.80	10.95	10.00	.21	.....	.21	.....	.42	1.25	§1.19	2.44	2.25	23.40	23.00
8.89	8.00	1.14	10.03	9.00	3.33	.....	3.33	3.00	1.80	2.13	§.28	2.41	2.47	30.75	29.00
10.91	8.00	1.42	12.33	9.00	3.31	.....	3.31	3.00	.65	.83	§.20	1.03	.82	26.41	26.00 22.00 30.00
8.25	8.00	1.16	9.41	9.00	2.39	.....	2.39	2.00	.82	1.06	§.25	1.31	1.03	23.20	21.00 22.00 22.00
9.67	9.00	1.26	10.93	10.00	3.32	.....	3.32	3.00	.78	.90	§.15	1.05	.82	25.26	24.00
8.62	8.00	1.41	10.03	9.00	3.16	.....	3.16	3.00	1.44	1.88	§.32	2.20	2.05	29.28	25.00
8.27	8.00	1.02	9.29	9.00	2.10	.....	2.10	2.00	.42	.66	§.30	.96	.82	20.97	21.50 21.00
8.17	8.00	1.30	9.47	9.00	2.02	.....	2.02	2.00	1.00	1.29	§.33	1.62	1.65	23.73	22.00
10.17	10.00	1.28	11.45	11.00	3.57	.....	3.57	3.00	2.47	3.13	‡.37	3.50	3.29	37.36	36.00
7.77	7.00	1.15	8.92	8.00	1.28	.....	1.28	1.00	.76	.89	§.16	1.05	.82	19.36	21.00
7.88	8.00	1.67	9.55	9.00	3.17	.....	3.17	3.00	1.16	1.33	§.18	1.51	1.23	25.58	22.00 30.00 32.00
8.72	8.00	.99	9.71	9.00	3.41	.....	3.41	3.00	.69	.81	§.13	.94	.82	23.98	28.00 21.50
*8.24	9.00	1.93	10.17	10.00	1.81	.....	1.81	2.00	.82	.99	§.16	1.15	.82	21.66	23.00 23.00
7.42	7.00	.94	8.36	8.00	3.12	.....	3.12	3.00	3.69	4.37	‡.36	*4.73	4.94	39.50	36.00 44.00
8.89	9.00	1.63	10.52	10.00	2.64	.....	2.64	2.00	2.10	2.45	§.24	2.69	2.47	30.93	25.00
*9.16	10.00	2.14	11.30	11.00	3.04	.....	3.04	3.00	1.04	1.42	‡.20	1.62	1.65	27.19	27.50
8.63	8.00	1.31	9.94	9.00	3.27	.....	3.27	3.00	.70	.91	§.20	1.11	.82	24.48	30.25 22.00 22.00
10.58	10.00	1.33	11.91	11.00	3.26	.....	3.26	3.00	1.99	2.64	‡.36	3.00	2.47	34.88	27.75
7.09	7.00	1.47	8.56	8.00	1.16	.....	1.16	1.00	.60	.85	‡.16	1.01	.82	18.40	19.00 20.00 22.00
8.10	8.00	1.95	10.05	9.00	2.37	.....	2.37	2.00	1.03	1.41	§.30	1.71	1.65	25.18	23.50
8.21	8.00	1.68	9.89	9.00	3.32	.....	3.32	3.00	1.75	2.17	‡.13	2.30	2.06	29.82	28.00
8.45	8.00	.96	9.41	9.00	2.04	.....	2.04	2.00	.57	.72	§.20	.92	.82	20.76	22.00 21.00 20.45
*7.26	8.00	1.50	*8.76	9.00	1.65	.....	1.65	1.50	1.63	1.99	§.22	2.12	2.06	24.60	23.00
7.98	8.00	1.59	9.57	9.00	2.12	.....	2.12	2.00	.51	.83	§.27	1.10	.82	21.67	22.00 19.50
*8.84	10.00	1.15	*9.99	11.00	3.24	.....	3.24	3.00	1.41	1.92	§.35	*2.27	3.29	29.82	32.00
7.64	7.00	1.28	8.92	8.00	1.67	.....	1.67	1.00	.31	.56	¶.64	1.20	.82	20.73	18.00
8.19	8.00	1.56	9.75	9.00	3.13	.....	3.13	3.00	1.64	1.93	§.27	2.20	2.06	28.99	30.00
8.21	8.00	1.53	9.74	9.00	2.06	.....	2.06	2.00	.59	.78	§.18	.96	.82	21.04	21.75 24.00
8.46	8.00	1.09	9.55	9.00	2.10	.....	2.10	1.50	1.39	1.77	§.28	2.05	2.06	26.17	.....
8.89	8.00	.98	9.87	9.00	3.32	.....	3.32	3.00	.65	.77	§.15	.92	.82	23.71	.....
8.41	8.00	1.62	10.03	9.00	3.24	.....	3.24	3.00	1.67	1.99	§.27	2.26	2.06	29.72	27.50 .....
9.08	9.00	1.43	10.51	10.00	3.18	.....	3.18	3.00	.61	.75	§.16	.91	.82	23.90	22.00 22.50 24.00 26.00
8.15	8.00	1.47	9.62	9.00	3.24	.....	3.24	3.00	1.35	1.60	§.19	1.79	1.65	27.27	27.00 25.00
8.26	8.00	1.28	9.54	9.00	3.32	.....	3.32	3.00	.93	1.11	§.15	1.26	1.23	24.88	23.00 22.50 24.25

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inacitve: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	AMERICAN AGRICULTURAL CHEMICAL CO.—Continued.		
2291	High Grade Crop Producer,	J. V. Lawrence, Nichols, N. Y., R. No. 3.	9.49
2868	†Maryland O. K. Ammoniated Fertilizer,	E. S. Minnich, Brillhorts,	9.32
2015		S. W. Heim, Pitman, R. D.,	
3178		Paxton Flour & Feed Co., Bowmansdale.	
2108	†Maryland Revised Special Compound for Potatoes and Tobacco.	Sam'l Hummel, Montery,	9.08
3384		Sam'l Faekler, Harrisburg,	
2085	Michigan Carbon Works General Crop Fertilizer Special.	Davis & Hyde, Spartanburg,	6.34
2857	†Milsom's Special Buffalo Guano,	N. H. Long, Greensburg, R. No. 3,	4.85
3333		Graham Bros., Darlington,	
2537	Milsom's Corn Fertilizer,	Lake Shore Fruit Co., North East,	7.69
2415	Milsom's Potato, Hop and Tobacco Fertilizer.	J. W. Eherts, Clearfield,	6.36
2858	†	N. H. Long, Greenshurg, R. No. 3,	
2539	†Milsom's Special Soil Enricher,	Lake Shore Fruit Co., North East,	
3472		D. R. Stein, Orwigsburg,	
2538	†Milsom's Truck Fertilizer,	Lake Shore Fruit Co., North East,	8.66
2732		D. W. Wagner, Eastou,	
2916		Morris Reeser, West Leesport,	
2416	†Milsom's Wheat, Oats and Barley,	J. W. Eherts, Clearfield,	7.52
3331		Sam. F. McQuiston, Meadville,	
2032	†Moro Phillips Special Farmer's Potato Mixture.	R. W. Daub, Muir,	7.45
2694		A. M. F. Stiteler, Uwchland,	
3590	Moro Phillip's C. & G. Complete Fertilizer,	J. I. Goss, Paintersville,	10.77
2691	Moro Phillip's Special Fertilizer,	A. M. F. Stiteler, Uwchland,	8.33
2039	†Moro Phillip's Special Standard Guano.	A. A. Schwalm, Secy., Hegins,	9.02
2692		A. M. F. Stiteler, Uwchland,	
2285	†North Western Special Complete Compound.	Jeff Kaltsfalther, Berlin,	8.54
5034		J. R. Schuchart, New Freedom,	
3433	North Western Special Farmers Standard,	Kemmer & Co., Lehighton,	9.13
2322	†North Western Special Garden Manure,	N. R. Yost, Myerstown,	8.31
3112		Wm. Apuf, Milford,	
2321	†North Western Special Red Line Fertilizer	N. R. Yost, Myerstown,	8.54
3111		Wm. Apuf, Milford,	
3429	Odorless Grass and Lawn Top Dresser,	Weeks Hardware, Scranton,	6.77
3103	Packer's Union Revised Gardner's Complete Manure.	David Turn, North Water Gap,	7.29
3113	Packer's Union Special Animal Corn Fertilizer.	S. A. Detrich, Milford,	10.57
2245	†Packer's Union Special Potato Manure,	N. H. Blough, Davidsville,	8.36
3104		David Turn, North Water Gap,	
2037	†Packer's Union Special Universal Fertilizer.	Monroe Savidge, Hegins, R. No. 1,	7.51
3240		Wm. Brown, Mill Creek,	
3180	Quimnipiac Climax Phosphate,	Paxton Flour & Feed Co., Bowmansdale.	8.24
2158	†Reese's Ammoniated Phosphate Mixture,	Harry Wilson, Frazer,	8.10
2029		Harry Keefer, Pine Grove,	
2625		D. F. Walker, Rockwood, R. No. 2,	
3573	Reese's May Flower,	C. H. Hershey, Manheim,	
2159	†Reese's Special Potato Manure,	Harry Wilson, Frazer,	7.91
3405		Mrs. V. A. Martin, Loysville,	
2030	Reese's Special Potato and Truck Manure,	Harry Keefer, Pine Grove,	7.86
2005	†Sharpless & Carpenter's Special Farmers' Brand Phosphate.	W. E. Knorr, Klingerstown, R. D.,	9.26
3179		Paxton Flour and Feed Co., Bowmansdale.	
2008	†Sharpless & Carpenter's No. Brand Phosphate.	W. E. Knorr, Klingerstown, R. D.,	8.98
2176		Hilles & Taggert, Norristowu,	
3182	Sharpless & Carpenter's No. 2, for Grain and Grass.	Paxton Flour & Feed Co., Bowmansdale.	5.49
2007	Sharpless & Carpenter's Special Complete Manure.	W. E. Knorr, Klingerstown, R. D.,	9.98
3471	Sharpless & Carpenter's Special Fish Guano.	J. Kunkle & Son, McKeansburg,	8.83
2819	†Sharpless & Carpenter's Special Potato, and Truck Guano.	Smith & McKelvey, Blairsville,	8.31
2109		Sam'l Hummel, Monterey,	
2828		S. T. & J. W. Gibson, Indiana,	

†Composite Sample.
*Constituents falls below guaranty.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs., at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as Muriate.	Present as Sulphate.	Found.	Guaranteed.	Water Soluble.	Available.	Inactive Insoluble.	Found.	Guaranteed.		
10.17	9.00	1.30	11.47	10.00	3.28	.....	3.28	3.00	.81	1.18	§.35	1.53	1.65	27.96	23.10
8.33	8.00	1.19	9.52	9.00	2.06	.....	2.06	2.00	.77	.89	§.16	1.05	.82	21.46	17.00 21.00 19.50
10.38	10.00	1.59	11.97	11.00	3.24	.....	3.24	3.00	1.24	1.51	‡.19	1.70	1.65	28.87	25.00 .....
*7.61	8.00	1.08	*8.69	9.00	3.21	.....	3.21	3.00	.60	.76	‡.10	.86	.82	22.17	24.00
8.12	8.00	1.38	9.50	9.00	3.22	.....	3.22	3.00	.48	.68	§.21	.89	.82	23.00	22.00 23.00
9.55	9.00	2.12	11.67	10.00	2.27	.....	2.27	2.00	1.90	2.40	‡.21	2.61	2.47	30.45	27.00
*7.75	8.00	2.32	10.07	9.00	3.09	.....	3.09	3.00	1.63	1.97	§.22	2.19	2.06	28.83	24.00 26.50
7.84	8.00	2.04	9.88	9.00	2.89	.....	2.89	3.00	1.22	1.49	§.21	1.70	1.65	26.12	24.75 27.00
9.94	10.00	2.04	11.98	11.00	2.93	.....	2.93	3.00	2.56	3.02	§.37	3.39	3.29	35.86	32.00 28.00
7.83	8.00	1.23	9.06	9.00	2.21	.....	2.21	2.00	.67	.82	§.20	1.02	.82	21.09	23.00 21.00 22.35
8.86	8.00	1.19	10.05	9.00	3.34	.....	3.34	3.00	1.09	1.32	§.18	1.50	1.23	26.62	24.00 23.00
7.98	8.00	1.08	9.06	9.00	2.04	.....	2.04	2.00	.63	.76	§.18	.94	.82	20.60	.....
8.72	8.00	1.31	10.03	9.00	3.16	.....	3.16	3.00	1.56	1.86	§.28	2.14	2.06	29.13	26.00 22.00
8.54	8.00	.98	9.52	9.00	2.94	.....	2.94	3.00	.75	.87	§.11	.98	.82	23.16	19.00
8.03	8.00	1.28	9.31	9.00	3.30	.....	3.30	3.00	.75	§.86	§.14	1.00	.82	23.54	21.50 19.00
8.33	8.00	1.87	10.20	9.00	3.16	.....	3.16	3.00	.95	1.17	§.18	1.35	1.23	25.39	19.00
10.50	10.00	1.47	11.97	11.00	3.09	.....	3.09	3.00	2.26	2.85	‡.26	3.21	3.29	35.47	32.00 31.00
8.93	8.00	1.17	10.10	9.00	3.75	.....	3.75	3.00	1.35	1.97	‡.40	2.37	2.47	31.38	22.00 26.50
5.37	5.00	.70	6.07	6.00	2.34	.....	2.34	2.00	2.79	3.42	‡.31	3.73	3.91	31.45	38.50
10.20	10.00	1.59	11.79	11.00	3.07	.....	3.07	3.00	1.66	2.06	§.34	2.40	2.47	31.52	25.50
10.24	10.00	1.59	11.83	11.00	2.50	.....	2.50	2.00	.95	1.30	§.30	1.60	1.65	26.79	28.50
8.00	8.00	1.68	9.68	9.00	3.36	.....	3.36	3.00	1.52	1.90	§.29	2.19	2.06	29.29	26.00 23.50
8.62	8.00	1.17	9.79	9.00	2.18	.....	2.18	2.00	.76	.88	§.11	.99	.82	21.79	21.00 .....
8.12	8.00	1.40	9.52	9.00	2.46	.....	2.46	2.00	.88	1.00	§.17	1.17	1.03	22.62	20.00
9.37	9.00	1.15	10.52	10.00	3.38	.....	3.38	3.00	.68	.81	§.14	.95	.82	24.63	25.00 24.00 21.00
8.91	8.00	1.21	10.12	9.00	2.58	.....	2.58	2.00	1.21	1.47	§.19	1.66	1.65	25.82	24.00
8.57	8.00	1.18	9.75	9.00	3.34	.....	3.34	3.00	1.09	1.28	‡.10	1.38	1.23	25.89	25.00 30.00
8.46	8.00	1.37	9.83	9.00	3.49	.....	3.49	3.00	1.72	2.15	‡.26	2.41	2.06	30.76	26.00
8.72	8.00	1.08	9.80	9.00	3.16	.....	3.16	3.00	.76	.88	§.12	1.00	.82	23.76	20.50 21.00
8.63	8.00	1.02	9.65	9.00	2.74	.....	2.74	2.00	1.15	1.43	§.30	1.73	1.65	26.26	22.00 25.00
7.49	7.00	1.08	8.57	8.00	1.49	.....	1.49	1.00	.74	.83	§.14	.97	.82	19.05	18.00
10.46	9.00	1.39	11.85	10.00	3.00	.....	3.00	3.00	1.11	1.37	§.30	1.67	1.65	28.12	25.00
8.48	8.00	1.24	9.72	9.00	3.32	.....	3.32	3.00	1.44	1.81	§.26	2.07	2.06	28.92	26.00
8.29	8.00	1.28	9.57	9.00	2.96	.....	2.96	3.00	.99	1.17	§.19	1.36	1.23	24.66	28.00 22.00 27.00

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inacitve: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	AMERICAN AGRICULTURAL CHEMICAL CO.—Continued.		
2175	Sharpless & Carpenter's Revised Soluble Tampico Guano.	Hilles & Taggart, Norristown, ...	7.42
3377	Special Potash Mixture for Potatoes, ...	S. A. Fishburn, Penbrook, ...	5.91
2481	†Susquehanna Ammoniated Phosphate, ..	Wm. Weaver, Bethlehem, R. No. 3,	8.06
2123		Amos K. Stoltzfus, Elverson, ...	
2644		Woy & Saylor, Somerset, ...	
2599	†Susquehanna Revised Special Potato and Tobacco Manure.	E. C. Tyson, Flora Dale, ...	9.79
2043		Woy & Saylor, Somerset, ...	
2752		Henry Moyer, Campbelltown, ...	
2360	†Susquehanna Special Potato Phosphate, ..	Wm. Weaver, Bethlehem, R. No. 3,	9.41
3168		A. H. Keeley & Sons, Schwenksville	
3183	Tygert Allen's Standard Brand Phosphate,	Paxton Flour & Feed Co., Bowmansdale.	8.25
2682	†Tygert Allen's Star Brand Phosphate, ..	Harvey Detweiler, Chester Springs,	7.86
3051		F. H. Shenberger, Red Lion, R. D. No. 1.	
2680	Tygert Allen's Special Star Potato Grower,	Harvey Detweiler, Chester Springs,	2.10
3120	†Williams & Clark's Americus Potato Manure.	David Werner, Nazareth, R. No. 2,	7.64
3295		Jacob Rush, Plumsteadville, ...	
2298	†Williams & Clark's Special Elk Brand,..	C. E. Drake, Athens, ...	8.81
2294		Jacob Rush, Plumsteadville, ...	
3199	Williams & Clark's Special Good Grower,..	Hervey J. Theis, Germania, ...	12.58
2738	Williams & Clark's Matchless Fertilizer,..	W. H. Best, Mecada, ...	8.68
2733	Williams & Clark's Prolific Fertilizer,....	Stewart Weaver, Easton, ...	8.17
3119	Wliams & Clark's Utility Brand, ...	R. Milheim, Nazareth R. No. 2, ..	7.62
2088	Wheeler's High Grade Vegetable Manure,..	Alcorn & Poole, Titusville, ...	9.75
2294	†Wheeler's Potato Manure, ...	Geo. Decker, Athens, ...	9.31
2561		W. S. Ickes, Reynoldsville, ...	
3379		O. F. Arnold, Dillsburg, R. No. 1,	
2447	†Zell's Economizer Phosphate, ...	Tressler Schlegel Co., Red Cross,	7.62
3389		B. F. Harting, Newport, ...	
3355	Zell's Hustler Phosphate, ...	Geo. B. Murphy, Red Lion, R. No. 1	10.62
3371	Zell's Revised Special Compound for Potatoes and Vegetable.	O. F. Arnold, Dillsburg, R. No. 1,	4.04
	AMERICAN FERTILIZER CO., BALTIMORE MD.		
3561	American Emergency Special Compound Guano.	Jones Eavenson, Christiana, ...	8.01
2254	American Fish and Bone Compound,.....	N. H. Blough, Davidsville, ...	12.21
2629	†American Grain & Grass Grower, ...	J. G. Emert, Somerset, ...	11.10
2879		R. B. Hyson, Bridgeton, ...	
	AMERICAN REDUCTION CO., PITTSBURGH, PA.		
3005	Common Sense, ...	J. J. Brisbine, Madison, ...	6.97
	ARMOUR FERTILIZER WORKS, BALTIMORE.		
3323	Ammoniated Phos. and Potash Fertilizer,..	J. F. Chisholm, McKean, ...	6.65
2475	†Corn and Grain Champion, ...	Fritz Bros., Garrett, ...	7.25
2381		S. G. Updegraff, Williamsport, ..	
2556		Jacob Bowser, St. Clairsville, ...	
2473	†Crop Grower, ...	Fritz Bros., Garrett, ...	7.54
2379		S. G. Updegraff, Williamsport, ...	
2622		J. Singmaster & Co., Macungie, ..	
2802	†Armour's (5-8-3), ...	Mansfield Bros., Coudersport, ...	3.41
2076		S. S. Bryan, Titusville, ...	
3135	†Armour's (4-8-3), ...	F. E. Bailey, Northbrook, ...	7.91
3216		R. A. DeCoursey, Liberty, ...	
2307		W. S. Buckman, Hatboro, ...	
2146	†Armour's Grain Grower, ...	S. K. Chambers & Bro., West Grove,	5.82
2078		S. S. Bryan, Titusville, ...	
2196		Geo. W. Holtzinger, Red Lion, ...	
2633	†Armour's (3-8-3), ...	J. Singmaster & Co., Macungie, ...	6.18
2145		S. K. Chambers & Bro., West Grove,	
2897		Louck's H'dw. Co., Scottdale,.....	

†Composite Sample.
*Constituents falls below guaranty.

LIZERS—Continued

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs., at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as Muriate.	Present as Sulphate.	Found.	Guaranteed.	Water Soluble.	Available.	Inactive Insoluble.	Found.	Guaranteed.		
10.57	10.00	1.48	12.05	11.00	3.52	.....	3.52	3.00	2.37	3.08	‡.41	3.49	3.29	37.71	35.00
6.48	6.00	1.03	7.51	7.00	3.09	.....	3.09	3.00	1.34	1.60	§.20	1.80	1.65	25.24	23.00
8.70	8.00	1.08	9.78	9.00	2.48	.....	2.48	2.00	1.26	1.57	§.23	1.80	1.65	26.02	22.00 22.00 23.75
*8.79	9.00	1.47	10.26	10.00	2.93	.....	2.93	3.00	1.33	1.51	§.20	1.71	1.65	26.79	*26.00 26.00
8.37	8.00	1.22	9.59	9.00	3.47	.....	3.47	3.00	1.66	1.99	§.26	2.16	2.06	29.36	24.00 25.00 25.00
8.64	8.00	1.43	10.07	9.00	2.00	.....	2.00	2.00	1.41	1.60	§.18	1.78	1.65	25.15	23.00
8.34	8.00	1.21	9.55	9.00	2.89	.....	2.89	3.00	1.65	1.98	‡.23	2.21	2.06	28.44	26.00 24.00
9.17	8.00	.99	10.16	9.00	3.54	.....	3.54	3.00	1.02	1.28	§.24	1.52	1.23	27.20	26.00
8.61	8.00	1.24	9.85	9.00	3.21	.....	3.21	3.00	1.08	1.62	§.38	2.00	2.06	28.39	25.00 24.01
8.76	8.00	1.50	10.26	9.00	3.22	.....	3.22	3.00	.68	.84	§.16	1.00	.82	24.28	24.00 20.50
7.94	8.00	1.75	9.69	9.00	3.54	.....	3.54	3.00	.97	1.21	§.18	1.39	1.23	26.02	25.00
8.47	8.00	1.03	9.50	9.00	2.50	.....	2.50	2.00	1.00	1.54	.39	1.93	1.65	26.50	22.00
7.32	7.00	1.77	9.09	8.00	1.32	.....	1.32	1.00	.62	.85	.19	1.04	.82	19.29	25.00
10.29	10.00	.92	11.21	11.00	3.12	.....	3.12	3.00	2.43	3.12	‡.39	3.51	3.29	36.39	30.00
*9.63	10.00	1.94	11.57	11.00	3.01	.....	3.01	3.00	1.28	1.70	‡.14	1.84	1.65	28.56	27.50
9.23	8.00	.98	10.21	9.00	2.91	.....	2.91	3.00	1.45	1.73	§.27	2.00	2.06	28.20	26.00 28.00
8.55	8.00	1.21	9.76	9.00	2.11	.....	2.11	2.00	.68	.79	¶.19	.98	.82	21.51	20.00 21.00 19.00
9.12	9.00	.99	10.11	10.00	3.00	.....	3.00	3.00	.79	1.00	‡.13	1.13	.82	24.44	21.00
8.90	8.00	1.21	10.11	9.00	3.45	.....	3.45	3.00	2.08	2.40	§.24	2.64	2.47	32.12	27.00
6.91	7.00	.94	7.85	8.00	1.35	.....	1.35	1.00	.49	....	.....	.62	.41	16.57	18.00
8.65	8.00	1.57	.10.22	9.00	3.92	.....	3.92	3.00	.89	1.34	§.44	1.78	1.65	29.10	23.00
9.32	9.00	1.33	10.65	10.00	3.51	.....	3.51	3.00	.66	.76	§.16	.92	.82	24.67	22.50 20.50
7.92	7.00	.93	8.85	8.00	1.53	.....	1.53	1.00	.66	1.06	§.57	1.63	1.23	22.66	22.00
9.55	9.00	.68	10.23	9.50	2.85	.....	2.85	3.00	.34	.61	§.25	.86	.82	23.25	24.00
9.17	9.00	.89	10.06	9.50	3.09	.....	3.09	3.00	.79	1.20	§.47	1.67	1.65	26.91	27.50 28.00 24.00
*7.73	8.00	.87	8.60	8.50	2.00	.....	2.00	2.00	.42	.62	§.26	.88	.82	19.96	22.50 24.50 21.00
8.48	8.00	1.34	9.82	8.50	3.16	.....	3.16	3.00	.45	1.11	§2.56	*3.67	4.11	35.73	40.00 40.00 38.00
8.39	8.00	.89	9.28	8.50	2.69	.....	*2.69	3.00	1.77	2.59	§.61	3.20	3.29	32.49	36.00 31.00
8.55	8.00	1.15	9.70	8.50	2.15	.....	2.15	2.00	.61	1.09	§.40	1.49	1.65	23.88	23.00 26.00 22.00
8.59	8.00	.89	9.48	8.50	3.38	.....	3.38	3.00	1.48	1.99	§.57	2.56	2.47	31.14	26.00 26.00 34.00

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive. ‡=2-5 or less; §=2-5 to 3-5; ¶=3-5 or more.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	ARMOUR'S FERTILIZER WORKS, BALTIMORE, MD.—Continued.		
2077	Armour's (2-8-3),	S. S. Bryan, Titusville,	3.96
3481	Armour's (7-6-3),	Geo. R. Thompson, Chathams Run,	7.05
2624	†Wheat, Corn and Oat Special,	J. Singmaster & Co., Macungie,	7.82
2380		S. G. Updegraff, Williamsport,	
2638		H. C. Beerits Sous, Somerset,	
	ATLANTIC FERTILIZER WORKS, BALTIMORE, MD.		
2297	Atlantic Blood, Bone, Fish and Potash,	C. E. Drake, Athens,	6.53
3418	Atlantic Corn, Wheat and Oats Special,	Cove Lumber Co., Marysville,	7.43
3048	Atlantic Gold Medal Superlor for all Crops,	Grove & Uffleman, Parke,	6.51
2275	Atlantic Standard Compound,	Hill & Walker, Shanksville,	7.96
	R. S. AUCKER, SHAMOKIN, PA.		
3000	Economy Potash Phosphate,	Geo. R. Hendricks & Son, Selinsgrove.	7.42
2999	Grade B. Bone and Slaughter House Phosphate.	Geo. R. Hendricks & Son, Selinsgrove.	8.89
3001	Grade D, Bone and Slaughter House Phosphate.	Geo. R. Hendricks & Son, Selinsgrove.	6.65
	BALTIMORE FERTILIZER CO., BALTIMORE, MD.		
2208	Honest Potato Grower,	Adam Shenberger, Dallastown,	4.11
	BALTIMORE PULVERIZING CO., BALTIMORE, MD.		
2329	High Grade Potato Guano,	J. L. Royer, Myerstown, R. No. 4,	7.88
2328	Practical Fertilizer,	J. L. Royer, Myerstown, R. No. 4,	6.09
2327	Royal Compound,	J. L. Royer, Myerstown, R. No. 4,	9.05
2331	Truckers Choice,	J. L. Royer, Myerstown, R. No. 4,	7.84
	BAUGH & SONS CO., PHILADELPHIA, PA.		
2405	†Baugh's Animal Base and Potash Compound for all Crops.	R. S. Forman, Center Hall,	7.72
2149		Edw. Brinton & Sons, West Chester,	
2970		W. E. Monifold, Fawn Grove,	
2971		John W. Eby, Zion,	
2831	†Baugh's Combination Animal Base Fertilizer.	T. K. George, Homer City,	9.29
3640		Jas. Fulton & Sons Co., Stewartstown.	
2160	†Baugh's Complete Animal Base Fertilizer,	Henry Palmer, Langhorne,	10.38
2013		W. W. Haas, Pitman, R. D.,	
2334		Edwards H'd'w. Co., Ebensburg,	
2138	†Baugh's Excelsior Guano,	Jas. G. Kauffman, Dauberville,	8.33
2014		W. W. Haas, Pitman, R. D.,	
2162		Henry Palmer, Langhorne,	
2571	Baugh's High Grade Ammoniated Animal Base.	Francis Baker, Everette,	7.42
3310	†Baugh's High Grade Potato Grower (Big Potato Brand).	Wm. Hobensack, Ivyland,	8.52
2103		Sam'l R. Wenger, Bareville, R. No. 1.	
2504	Baugh's Highly Improved Tobacco Culture Manure.	Theo. Gangewere, Curryville,	3.96
2104		Sam'l R. Wenger, Bareville, R. No. 1.	
2244	†Baugh's Peninsula Grain Producer,	W. H. Blough, Davidsville,	6.99
2004		C. G. Updegrove, Sacramento,	
2349		John F. Stier, Johnsonville,	
2140	†Baugh's Peruvian Guano Substituted for Potatoes and all Vegetables.	Jas. G. Kauffman, Dauberville,	8.26
2503		Theo. Gangewere, Curryville,	
2251	†Baugh's Potato and Truck Special for all Truck Crops.	N. H. Blough, Davidsville,	9.45
2151		Edw. Brinton & Sons, West Chester,	
2410		Rautch & Swartle, Clearfield,	
2409	Baugh's Pure Bone and Potash Mixture.	Rautch & Swartle, Clearfield,	4.27
2119	†Baugh's Special Potato Manure,	L. A. Geiger, Joanna,	10.71
2001		C. G. Updegrove, Sacramento,	
2150		Edw. Brinton & Sons, West Chester,	
2937	The Wrapper Leaf Brand, a Special Manure for Seedleaf Tobacco.	M. S. Grayhill & Son, Bareville,	4.18

†Composite Sample.
*Constituents falls below guaranty.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs., at point of selection.
Available.		Insoluble.	Total.		Present as Muriate.	Present as Sulphate.	Total.		Water Soluble.	Available.	Inactive Insoluble.	Total.			
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.				Found.	Guaranteed.		
*7.30	8.00	3.31	10.61	8.50	3.00	.....	3.00	3.00	.75	1.22	§.39	1.61	1.65	25.98	30.00
6.63	6.00	.87	7.50	6.50	.12	3.46	3.58	3.00	3.95	5.20	‡.50	5.70	5.76	44.97	36.00
7.01	7.00	.66	7.67	7.50	1.05	.....	1.05	1.00	.40	.62	§.29	.91	.82	17.26	19.00 22.00 20.00
7.58	8.00	1.70	9.28	.....	3.12	.....	3.12	3.00	1.31	1.82	§.64	2.46	2.47	29.55	28.00
*9.37	11.00	1.33	10.70	.....	3.65	.....	3.65	3.00	.57	.70	¶.27	.97	.82	25.24	.....
8.20	8.00	1.25	9.45	.....	3.53	.....	3.53	3.00	1.05	1.23	¶.37	1.60	1.65	26.92	22.85
8.06	8.00	1.02	9.08	.....	2.09	.....	2.09	2.00	1.03	1.19	¶.42	1.61	1.65	23.73	23.00
8.03	8.00	1.53	9.56	.....	1.57	.....	1.57	1.00	.55	.71	‡.11	.82	.41	19.20	.....
7.93	8.00	1.40	9.33	.....	3.03	.....	3.03	3.00	1.51	1.68	§.18	1.86	1.65	26.89	.....
7.98	8.00	1.45	9.43	.....	1.46	.....	1.46	1.00	.80	.96	§.13	1.09	.82	20.28	.....
6.91	6.00	.47	7.38	7.00	3.22	.....	3.22	3.00	1.27	1.42	¶.32	1.74	1.60	25.38	24.00
8.47	8.00	1.14	9.61	.....	3.13	.....	3.13	3.00	.96	1.24	§.36	1.60	1.64	26.29	24.00
8.42	8.00	1.31	9.73	.....	2.29	.....	2.29	2.00	.35	.50	¶.39	.89	.82	21.38	18.00
9.09	8.00	.78	9.87	.....	1.91	.....	1.91	2.00	1.08	1.27	§.29	1.56	1.64	23.90	22.00
8.08	8.00	1.12	9.20	.....	3.05	.....	3.05	1.50	1.52	1.95	§.33	2.28	2.46	28.94	26.50
8.01	8.00	1.78	9.79	.....	2.81	.....	2.81	2.00	1.05	1.56	‡.31	1.87	1.65	26.61	25.00 25.00 23.00
10.33	10.00	1.69	12.02	.....	3.48	.....	3.48	3.00	.99	1.33	§.38	1.71	1.65	29.30	25.00 29.00 25.52
11.14	10.00	1.44	12.58	.....	2.56	.....	2.56	2.00	1.27	1.60	§.34	1.94	1.65	29.23	28.00 23.00 27.00
10.39	10.00	2.50	12.89	.....	4.19	.....	4.19	3.00	.71	1.01	§.34	1.35	1.02	29.68	22.50 22.00 27.00
11.57	10.00	.96	12.53	.....	.53	.44	.97	.....	2.56	2.84	§.29	3.13	3.30	31.71	28.00
8.52	8.00	1.68	10.20	.....	3.23	.....	3.23	3.00	2.78	3.10	§.37	3.47	3.30	35.24	34.00 .....
6.59	5.00	.90	7.49	.....	1.47	1.16	*2.63	3.00	4.44	4.88	§.45	*5.33	5.76	40.86	28.50 .....
9.55	9.00	1.75	11.30	.....	3.05	.....	3.05	3.00	.57	.78	¶.40	1.18	.82	25.53	21.00 21.50 22.00
*7.68	8.00	3.72	11.40	.....	3.57	.....	3.57	3.00	3.11	3.75	‡.41	4.16	4.12	39.28	31.75 28.50 29.00
10.24	10.00	1.31	11.55	.....	.11	3.15	3.26	3.00	1.33	2.55	‡.44	2.99	2.88	35.32	31.00 35.00
8.47	.....	7.87	16.34	15.00	3.06	.....	3.06	3.00	.90	2.06	§.80	2.86	2.47	35.05	35.00
10.91	10.00	1.43	12.34	.....	3.46	.....	3.46	3.00	1.27	1.49	§.34	1.83	1.65	30.39	25.00 25.00 27.00
4.88	3.50	2.49	7.37	.....	.07	3.11	3.18	3.00	2.44	2.88	§.46	3.30	3.30	32.31	26.75

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inacitve: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	THE BERG CO., PHILADELPHIA, PA.		
2186	Berg's High Grade Potato Manure,	Edw. F. Bracken, Paoli,	8.77
2169	Berg's Standard Bone Manure,	L. W. Danenhower, Southampton,	7.37
	BERGER BROS., EASTON, PA.		
2497	Farmer's Favorite,	John S. Osterbrook, Easton,	6.37
2734	Potato & Truck Specials,	John Kuntzman, Easton,	....
	BOWKER FERTILIZER CO., NEW YORK CITY.		
2684	†Bowker's Farm and Garden Phosphate,	Harvey L. Moses, Chester Springs,	7.62
2074		Kernochan & Co., Titusville,	
2719		M. P. Whitinight, Bloomsburg,	
3571	Bowker's Special Ideal Potash Compound,	H. K. Millinger, Rowenna,	9.40
2075	†Bowker's Lawn and Garden Dressing, Revised.	Kernochen & Co., Titusville,	6.24
2901		Youngwood Lumber and Supply Co., Youngwood.	
2899	†Bowker's Potash Fertilizer,	Youngwood Lumber and Supply Co., Youngwood.	5.11
3217		R. A. DeCoursey, Liberty,	
2312	†Bowker's Potash or Staple Phosphate,	Walter Pierce, E. Smithfield,	6.62
2058		Jas. E. Wheeling, Cochranton, R. D.	
2889	†Bowker's Special Potato and Vegetable Fertilizer.	J. D. Porch, Mt. Pleasant,	7.36
2792		L. F. Harris, 2115 N. 2d St., Harrisburg, Pa.	
2060		Jas. E. Wheeling, Cochranton, R. D.	
3076		M. M. Harter, Nescopeck,	
2791	†Bowker's Special Crop Grower, Revised.	L. F. Harris, 2115 N. 2d St., Harrisburg.	8.26
2794		M. H. Hamilton, Ulysses,	
3281	Stockbridge Special No. 1,	P. L. Touhey, Little Meadows,	8.95
3447	Stockbridge Special No. 2,	Murray & Co., Honesdale,	7.87
	S. B. BRODBECK, BRODBECKS, PA.		
2883	Brodbeck's Reliable,	S. B. Brodbeck, Brodbecks,	2.72
3030	Brodbeck's Standard Crop Producer,	S. B. Brodbeck, Brodbecks,	11.11
	CENT. CHEM. CO., THOMAS FERTILIZER WORKS, HAGERSTOWN, MD.		
2592	†C. C. C. Atlas,	Biglerville Warehouse Co., Biglerville.	8.80
2871		H. J. Cline, Salladasburg,	
2841		Swank Bros., Somerset,	
2370	†C. C. C. Bone Mixture,	H. J. Cline, Salladasburg,	6.87
2269		Geo. Barkman, Shanksville,	
2386		Jesse Klinger, State College,	
2707		W. H. Diehl, Northumberland, R. No. 1.	
2044	†C. C. C. Early Crop Special,	S. K. Savidge, Valley View,	9.06
3440		J. J. Gerhart, Weatherly,	
2462	†C.C. C. Empire,	Bird Bros., Meyersdale R. No. 1,	8.44
2045		S. K. Savidge, Valley View,	
2785		E. W. Rupp, Shiremanstown,	
3438	C. C. C. Excelsior,	J. J. Gerhart, Weatherly,	7.63
2210	C. C. C. Golden Sheaf,	H. W. Burg, East Prospect,	7.94
2042	C. C. C. Special,	S. K. Savidge, Valley View,	6.73
	COE MORTIMER CO., NEW YORK.		
2464	E. Frank Coe's Corn King (Special),	P. C. Miller, Meyersdale,	9.20
2465	†E. Frank Coe's Columbian Corn & Potato Fertilizer (Special).	P. C. Miller, Meyersdale,	9.76
2361		C. J. Estebrook, Rummerfield, R. D.	
2484		F. F. Kuntzman, Hellertown, R. No. 1.	
3160	†E. Frank Coe's Gold Brand Excelsior Guano (Special).	John W. Root, Kimberton,	9.89
2824		Geo. J. New, Blairsville,	
3328		Tucker & Squire, Springboro,	
2482	E. Frank Coe's Onondaga Special,	T. F. Kuntzman, Hellertown, R. No. 1.	8.18

†Composite Sample.
*Constituents falls below guaranty.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs. at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Water soluble.	Available.	Inactive insoluble.	Found.	Guaranteed.		
9.13	8.00	2.23	11.36	11.00	4.49	.....	4.49	4.00	2.12	2.73	‡.40	3.13	3.00	37.23	36.00
8.34	8.00	1.75	*10.09	11.00	2.59	.....	2.59	1.25	1.85	2.40	‡.30	*2.70	3.00	30.37	31.00
7.55	6.00	1.27	8.82	7.00	2.48	.....	2.48	2.00	.37	.73	§.37	1.10	.82	21.91	25.00
8.04	8.00	1.30	9.34	9.00	3.11	.....	3.11	3.00	.95	1.64	‡.47	2.11	2.06	28.17	.....
8.37	8.00	1.28	9.65	9.00	2.78	.....	2.78	2.00	1.23	1.44	.32	1.76	1.65	26.23	25.00 28.00 24.10
9.84	10.00	1.31	11.15	11.00	2.95	.....	2.95	2.50	1.10	1.29	§.17	1.46	1.23	26.53	29.00
6.95	7.00	9.97	16.92	8.00	2.99	.....	2.99	3.00	3.05	4.29	8.52	4.81	4.94	43.44	47.00 50.00
6.72	6.00	.41	7.13	7.00	2.02	.....	2.02	2.00	.64	.77	‡.10	.87	.82	18.62	22.50 24.00
*7.64	8.00	1.18	8.82	9.00	3.45	.....	3.45	3.00	.60	.74	§.16	.90	.82	22.99	24.00 21.00 25.00
9.90	10.00	1.63	11.53	11.00	3.42	.....	3.42	3.00	1.82	2.21	§.26	2.47	2.47	32.22	28.50 27.00
10.08	10.00	1.66	11.74	11.00	3.28	.....	3.28	3.00	1.31	1.53	§.23	1.76	1.65	29.00	..... 28.00
8.49	8.00	1.24	9.73	9.00	3.68	.....	3.68	3.00	2.45	3.40	‡.54	3.94	4.11	38.22	31.35
10.17	10.00	.61	*10.78	11.00	3.95	.....	3.95	3.00	2.42	3.09	§.49	3.58	3.29	38.35	35.00
9.24	8.00	.62	9.86	9.00	2.31	.....	2.31	2.00	.20	.31	¶.25	.56	.41	17.85	18.00
9.91	9.00	1.22	11.13	10.00	3.65	.....	3.65	3.00	.79	.89	¶.25	1.14	.82	26.59	21.00
*8.60	9.00	.91	9.51	.....	2.64	.....	*2.64	3.00	.58	.71	¶.21	.92	.82	22.09	22.00 18.65 20.00
8.10	8.00	.85	8.95	.....	1.95	.....	1.95	2.00	.95	1.21	§.30	1.51	1.65	22.93	18.60 23.00 .....
*11.65	12.00	.55	12.20	.....	3.23	.....	3.23	3.00	2.95	3.27	‡.21	3.48	3.29	37.75	..... 31.00 33.00
12.65	12.00	.84	12.89	.....	2.99	.....	2.99	3.00	1.28	1.43	§.21	1.64	1.65	29.30	27.75 25.60 27.00
*7.31	10.00	1.16	8.47	.....	3.63	....	3.63	2.00	1.29	1.46	§.21	1.67	1.65	26.50	25.00
8.06	8.00	.84	8.90	.....	.85	.....	.85	1.00	.58	.76	‡.10	.86	.82	17.67	18.00
6.26	6.00	.44	6.70	.....	3.13	.....	3.13	3.00	5.77	5.92	§.18	*6.10	7.46	44.49	42.00
10.00	10.00	1.42	11.42	11.00	3.72	.....	3.72	3.00	1.91	2.26	‡.21	2.47	2.47	32.79	28.00
9.39	9.00	1.38	10.77	10.00	2.14	.....	2.14	2.00	.79	1.10	§.33	1.43	1.23	24.51	23.00 20.95 20.00
8.60	8.00	1.15	9.75	9.00	3.05	.....	3.05	3.00	1.88	2.24	§.28	2.52	2.47	30.32	30.00 30.00 28.00
8.26	7.00	1.82	10.08	8.00	1.24	.....	1.24	1.00	.69	.90	§.19	1.09	.82	20.26	18.00

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.

Sample number.	Manufaeturer and Brand.	From Wbom Sample Was Taken.	Moisture in 100 pounds.
	COE MORTIMER CO., NEW YORK—Continued.		
2483	†E. Frank Coe's Peuna. No. 1 Grain Special.	T. F. Kuutzman, Hellertown, R. No. 1.	
2302		C. J. Estabrook, Rummerfield, R. D.	8.25
2825		Geo. J. New, Blairsville,	
2128	E. Frank Coe's Reliable Crop Grower Speeial.	Jacob Most, Elverson,	7.86
	COLUMBIA GUANO CO., BALTIMORE, MD.		
2061	†Columbia Grain Speeial Fertilizer,	P. F. Schall, Cochranton,	3.43
3106		John M. Cook, Riverside Park,	
2062	Columbia Soluble Guano,	P. F. Schall, Cochrantou,	5.63
2814	Columbia Stronghold Guano,	Owlett & Twilliger, Galiton,	7.10
3087	Columbia Wheat, Corn and Grass Speeial Fertilizer.	M. P. Whitenight, Bloomsburg,	4.93
	CONSUMER'S CHEMICAL CORPORATION, NEW YORK.		
3215	Consumer's Complete Compound,	Sawyer Bros., Liberty,	7.69
3109	Consumer.'s Pure Sure Corn aud Vegetable (with 3% Potash).	George Nyce, Egypt Mills,	2.85
2838	†Consumer's Pure Sure Fertilizer for general use.	Morris Speicher, Somerset, R. No. 1,	
2714		Jos. W. Helwig, Catawissa, R. No. 1.	8.76
2979	†Consumer's Pure Sure Grain Mixture	Snyder & Miller, Mifflinburg,	
3249		T. C. Knouse, Benton, R. No. 3,	
2982		Snyder & Miller, Mifflinburg,	7.86
3269		W. L. Miller, Gleason,	
3110	†Consumer's Special Higb Grade Fertilizer	Geo. Nyce, Egypt Mills,	
3079		Zehner Bros., Bloomsburg,	9.63
3270		W. L. Miller, Gleasou,	
2715	†Consumer's Pure Sure Potato and Vegetable 3% Potash.	Jos. W. Helwig, Catawissa,	6.60
2840		Morris Speicher, Somerset,	
	HENRY COPE & CO., LINCOLN UNIVERSITY, PA.		
3316	Ammoniated Phosphate,	Lyburn Whitaker, Oxford,	10.10
2148	Potato & Corn Phosphate,	S. K. Chambers & Bro., West Grove,	9.97
	JOSIAH COPE & CO., BALTIMORE, MD.		
2135	†Ammoniated Phosphate,	W. H. Dreibelbis, Shoemakersville, R. D.	7.14
2630		Ed. H. Miller, Somerset, R. No. 4,	
2631	†General Mixture,	Ed. H. Miller, Somerset, R. No. 4,	10.02
3312		Howard Long, Oxford,	
3560	Special Ammoniated Mixture,	Jones Eavenson, Christiana,	6.84
	JAS. G. DOWNWARD CO., COATESVILLE, PA.		
2163	Pioneer Potato Manure,	Isaac Tomlinson, Huntingdon Valley,	8.39
2165	Potato, Corn & Grain Speeial,	Isaac Tomlinson, Huntingdon Valley,	11.02
	EASTERN CHEMICAL CO., NEW YORK.		
3365	Eastern Planter's Favorite,	Diehl, Omwake & Diehl, Chambersburg.	2.53
	ERIE REDUCTION CO., ERIE, PA.		
2547	Acidulated Fish Special Fertilizer,	W. D. Riply, Wesleyville,	4.05
2548	Erie Grain Special,	W. D. Riply, Wesleyville,	3.32
2549	General Crop Speeial,	W. D. Riply, Wesleyville,	4.01
	EUREKA CHEMICAL CO., BALTIMORE, MD.		
3023	†Eureka Fish and Potash,	C. C. Davis, Greensburg,	3.67
3032		J. P. Schuchart, New Freedom,	
2790	Eureka High Grade Trucker,	Daniel Mader, Linglestown, R. No. 2	4.68
2662	†Eureka Potato and Vegetable No 1,	Willis Gill, Cochranville,	
2611		Edwin Clause, New Tripoli,	4.96
3047		J. H. Bartenslager, Stewartstown,	
3059	Eureka Potato and Vegetable,	Jos. P. Acker, Breiningsville,	3.03

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs. at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Water soluble.	Available.	Inactive Insoluble.	Found.	Guaranteed.		
8.32	8.00	1.35	9.67	9.00	3.20	.....	3.20	3.00	.63	.79	§.21	1.00	.82	23.61	22.00 20.00 25.00
10.31	10.00	1.10	11.41	11.00	2.54	.....	2.54	2.00	1.05	1.50	§.31	1.81	1.65	27.62	.....
9.07	8.00	1.77	10.84	8.50	2.35	.....	2.35	2.00	.55	.87	§.20	1.07	.82	23.02	21.50 22.00
7.85	8.00	2.28	10.13	8.50	1.98	.....	1.98	2.00	1.07	1.59	‡.25	1.84	1.65	25.09	25.00
9.84	10.00	3.32	13.16	10.50	3.54	.....	3.54	3.00	2.27	3.10	‡.28	3.38	3.29	37.60	29.00
8.67	8.00	1.78	10.45	8.50	1.15	.....	1.15	1.00	.57	.83	‡.16	.99	.82	19.96	20.00
8.57	8.00	1.27	9.84	9.00	3.42	.....	3.42	2.00	1.04	1.29	§.32	1.61	1.65	26.97	23.00
9.30	8.00	.95	10.25	9.00	2.40	.67	3.07	3.00	2.03	2.47	‡.29	2.76	2.47	32.15	.....
8.30	8.00	1.62	9.92	9.00	3.54	.....	3.54	3.00	1.10	1.43	§.40	1.83	1.65	28.33	23.00 ..... 23.00 22.75
8.57	8.00	.91	9.48	9.00	2.27	.....	2.27	2.00	.72	.85	§.17	1.02	.82	21.63	..... 20.50
14.43	14.00	1.04	15.47	15.00	3.86	.....	3.86	3.00	1.51	1.72	§.16	1.88	1.65	34.39	..... 26.00 29.25
8.49	8.00	.94	9.34	9.00	2.80	.58	3.38	3.00	2.96	3.36	‡.27	3.63	3.29	36.14	..... 28.00
10.40	7.00	.74	11.14	9.00	2.26	.....	2.26	2.00	.92	1.00	¶.23	1.23	1.00	25.23	22.00
10.24	7.00	.66	10.90	9.00	3.62	.....	3.62	3.00	1.37	1.51	¶.21	1.72	1.21	29.04	25.00
8.74	8.00	1.08	9.82	9.00	2.80	.56	3.36	3.00	.66	.81	‡.10	.91	.82	23.85	21.00 20.00
8.83	9.00	1.58	10.41	10.00	3.40	.....	3.40	3.00	1.53	1.77	§.25	2.02	1.85	29.17	23.75 26.00
9.13	8.00	1.02	10.15	9.00	2.44	.....	2.44	2.00	1.19	1.45	§.20	1.65	1.65	25.63	24.00
10.48	10.00	2.08	12.56	11.00	2.26	.....	2.26	2.00	2.86	....	.....	*3.04	3.30	33.34	35.00
*8.85	10.00	.58	*9.43	11.00	2.57	.....	2.57	2.00	1.86	2.05	§.13	2.18	1.65	27.90	29.00
7.96	8.00	.76	8.72	.....	2.76	.....	*2.76	3.00	1.18	1.46	§.27	1.73	1.65	25.51	26.00
10.53	10.00	1.82	12.35	.....	.53	.18	.71	.....	.52	.83	§.36	1.19	.82	21.70	21.00
9.48	8.00	3.70	13.18	.....	1.75	.....	1.75	1.50	1.18	1.80	§.54	2.34	2.47	29.02	27.00
*8.60	9.00	2.45	11.05	.....	2.13	.....	2.13	1.50	.53	.93	§.39	1.32	1.23	23.64	23.00
*7.68	8.00	.40	*8.08	8.50	.11	.69	.80	.50	.33	.41	¶.15	.56	.41	15.84	22.00 16.50
8.69	8.00	.71	9.40	8.50	1.70	.....	*1.70	2.00	1.98	2.35	§.31	2.66	2.47	28.12	.....
8.46	8.00	.91	9.37	8.50	2.59	.....	*2.59	3.00	1.14	1.45	§.28	1.73	1.65	25.72	25.00 23.00 24.00
8.94	8.00	.45	9.39	8.50	1.38	.....	1.38	1.00	.95	1.23	§.30	1.53	1.65	22.59	22.00

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.

*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	EUREKA FERTILIZER CO. OF LANCASTER, PENNA., LANCASTER, PA.		
2769	Potato and Vegetable,	H. Manning & Son, Newville,	7.79
	FARMER'S FERTILIZER, SEED & HAY CO., WOMELSDORF, PA.		
3126	Grass & Grain Grower,	Farmers' Fertilizer Seed & Hay Co., Womelsdorf.	6.00
	FARMERS FERTILIZER WORKS, ELIZABETHTOWN, PA.		
2106	†Pride of Donegal,	C. B. Gochnauer, Lititz,	6.39
2764		Ben Garman, Elizabethtown,	
	W. S. FARMER & CO., BALTIMORE, MD.		
3039	Clyde Brand,	A. M. Bartenslager, Stewartstown, R. D.	7.18
2579	Pelican Guano Revised,	J. H. Duttera, New Oxford,	3.17
	GRIFFITH & BOYD CO., BALTIMORE, MD.		
2985		R. M. Arbogast, Winfield, R. D.,	
2378	†Cereal Plant Food,	S. A. Glosser, Linden,	8.16
3037		H. W. Rehmeyer, Turnpike,	
2945	Griffith & Boyd Co.'s Double Strength Tobacco Grower.	Willis C. Herr, Strausburg,	11.90
3175	Farmers' Imp. Phosphate,	S. B. Stoner, Grantham,	7.26
3036	Farmers Bone Mixture,	H. W. Rehmeyer, Turnpike,	8.26
2377		S. A. Glosser, Linden,	
2266	†Farmer's Potato & Tomato,	J. N. Walter, Stoyestown,	7.98
2545		R. S. Carter, Harbor Creek,	
2546		R. S. Carter, Harbor Creek,	
2559	†Reliable Crop Grower,	E. A. Meyers, Hooversville,	6.21
2701		E. A. Slagle, Paxinos,	
2659	Trucker's Stable Manure,	Passmore & Co., Nottingham,	8.14
	W. S. HASTINGS & SON, ATGLEN, PA.		
2669	Octoraro Brand,	Wm. S. Hastings & Son, Atglen,	4.86
	S. M. HESS & BRO., INC., PHILADELPHIA.		
2753	†Big Crop Fertilizer,	H. M. Hostetter, Campbelltown,	9.84
2844		Edw. F. Miller, Somerset,	
3265		H. N. Carpenter, Wellsboro,	
2124	†Farmer's General Fertilizer,	Stephen H. Mast, Elverson,	6.79
3321		A. L. Veit, McKean,	
3494	High Grade Potato Manure,	W. A. Beck, Warrior's Mark,	6.75
2249		Moses Weaver, Holsopple,	
2126	†Keystone Phosphate,	Stephen H. Mast, Elverson,	8.36
2461		Howard Fike, Meyersdale,	
2242		Moses Weaver, Holsopple,	
2127	†Potato Manure,	Stephen H. Mast, Elverson,	7.91
2256		Austin Hemminger, Holsopple, R. No. 1.	
2247		Moses Weaver, Holsopple,	
2125	†Special Corn Manure,	Stephen H. Mast, Elverson, R. No. 3	7.75
2255		Austin Hemminger, Holsopple, R. No. 1.	
	P. HOFFMAN & BRO., RAUBSVILLE, PA.		
3303	Grain & Corn,	P. Hoffman & Bro., Raubsville,	3.26
2739	†Hoffman Potato & Truck,	Howard Brodesman, Easton,	2.11
3305		P. Hoffman & Bro., Raubsville,	
	HUBBARD'S FERTILIZER CO. OF BALTIMORE CITY, BALTIMORE, MD.		
2970		H. M. Owen & Co., Lewistown,	
2373	†Hubbard's Columbia Special,	Geo. Pantot, White Pine,	7.47
3195		P. W. G. Raker, Elizabethville,	
2374		Geo. Pantot, White Pine,	
2066	†Hubbard's English Compound,	Wm. Schadle, Klingerstown, R. D.,	7.40
3193		P. W. G. Raker, Elizabethville,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs. at point of selection.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.		Water soluble.	Available.	Inactive insoluble.	Total.			
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.				Found.	Guaranteed.		
10.31	8.00	1.98	12.29	9.00	.05	2.24	*2.29	3.00	.73	.87	§.16	*1.03	1.65	24.67	.....
3.77	.....	6.22	9.99	4.50	.04	.33	.37	.....	.88	3.73	‡.17	*3.90	4.12	29.49	28.00
7.52	7.00	1.90	9.42	.....	.09	3.94	4.03	3.00	.62	1.26	§.60	1.86	1.65	29.72	24.00 .....
8.36	8.00	1.12	9.48	9.00	2.37	.....	2.37	2.00	.76	.92	§.20	1.12	.82	22.28	22.00
8.72	8.00	.76	9.42	9.00	2.59	.....	2.59	2.00	.36	....	.....	.56	.41	18.13	18.50
9.08	8.00	2.01	11.09	9.00	2.17	.....	2.17	2.00	.53	.72	§.26	.98	.85	22.51	20.50 23.00 20.00
8.35	8.00	1.11	9.46	9.00	3.13	.....	3.13	3.00	1.62	1.85	¶.35	*2.20	2.50	28.90	29.00
8.54	7.00	2.11	10.65	8.00	2.54	.....	2.54	2.00	.56	.83	§.33	1.16	.85	23.55	21.50
11.89	9.00	1.11	13.00	10.00	.12	.72	.84	.....	.51	.85	§.48	*1.32	1.65	23.58	24.00
9.11	8.00	1.03	10.14	9.00	3.99	.....	3.99	3.00	.55	.81	¶.46	1.27	1.25	26.86	25.00 23.00 26.00
8.83	8.00	2.08	10.91	9.00	1.33	.38	1.71	1.00	.53	.68	§.22	.90	.85	21.10	22.00 20.00 20.00
6.17	5.00	.67	6.84	6.00	4.07	.....	4.07	3.00	2.19	2.61	§.48	3.09	2.75	32.71	28.00
8.72	8.00	.51	9.23	.....	3.36	.....	3.36	3.00	1.29	1.40	¶.25	1.65	1.65	26.88	24.00
10.48	10.00	1.17	11.65	11.00	2.85	.....	2.85	3.00	1 25	1.51	§.20	1.71	1.65	27.98	25.00 25.00
8.02	8.00	1.11	9.13	9.00	3.38	.....	3.38	3.00	.62	.79	§.14	.93	.82	23.44	25.00 22.00 24.00
10.18	10.00	1.79	11.97	11.00	3.27	.....	3.27	3.00	2.63	3.05	§.32	3.36	3.29	36.31	35.00
8.41	8.00	1.40	9.84	9.00	1.69	.....	1.69	1.00	.84	.99	§.16	1.15	.82	21.39	19.50 19.00 19.00
9.83	9.00	1.23	11.06	10.00	3.15	.....	3.15	3.00	1.62	2.04	§.29	2.33	2.47	30.97	28.50 29.00 27.50
8.40	8.00	1.17	9.58	9.00	.05	2.45	2.50	2.00	.68	.82	§.12	.94	.82	23.54	20.75 21.00 20.00
8.26	8.00	4.33	12.59	10.00	2.01	.....	2.01	2.00	.38	.59	§.20	.79	.82	21.64	22.00
*7.51	8.00	6.13	13.64	10.00	3.19	.....	3.19	3.00.	.47	.85	‡.22	1.07	.82	25.42	28.00 26.00
8.41	.8.00	1.21	9.62	8.75	1.33	.....	1.33	1.00.	.20	.34	§.20	.54	.41	15.50	.... 18.00
9.17	8.00	1.69	10.86	8.75	1.21	....	1.21	1.00	.46	.63	§.17	.80	.82	19.54	..... 19.00 19.00

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
2525	†Hubbard's Farmer's I. X. L.,	E. J. Hall, Tioga,	7.43
2376		Geo. Pantot, White Pine,	
3392		B. F. Harting, Newport,	
2977	Hubbard's Yellow Wrapper,	Union Hdw. Co., Mifflinburg,	7.41
	M. P. HUBBARD & CO., BALTIMORE, MD.		
3088	Hubbard's Animal & Fish Ammoniated Compound.	D. C. Shuman, Bloomsburg,	6.01
2518	†Hubbard's Celebrated Phosphate,	Grant Lewis, Mansfield,	7.11
2211		H. W. Burg, East Prospect,	
3067		Wm. Majer, Leman,	
2517	†Hubbard's Fish, Meat & Potash Compound.	Grant Lewis, Mansfield,	9.60
3085		D. C. Shuman, Bloomsburg,	
2597	Hubbard's Good & Cheap Compound,	N. Guy Snyder, Aipers,	5.91
2209	†Hubbard's Harvest King for Wheat and Grass.	H. W. Burg, East Prospect,	6.80
2115		L. A. Geiger, Joanna,	
3196		P. W. G. Raker, Elizabethville,	
2117	Hubbard's Old Economy: Best for the price,	L. A. Geiger, Joanna,	6.85
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.		
2529	†Buffalo Ideal Wheat and Corn,	Penn Distributing Co., Union City,	9.63
2860		W. J. Grover & Son, Newfield,	
2810	Buffalo Two-Eight-Three,	Jno. Miller, Coudersport,	7.58
2273	†Buffalo One-Eight-Two,	Ed. Frazer, Shanksville,	8.17
3212		Snyder Bros., Liberty,	
2815		Owlett & Twilliger, Galeton,	
2271	†Buffalo One-Eight-Three,	Ed. Frazer, Shanksville,	8.39
3352		A. C. Dougherty, Grove City,	
2071	†Buffalo Vegetable and Potato,	H. B. Edwards, Titusville,	4.58
2816		Owlett & Twilliger, Galeton,	
	JARECKI CHEMICAL CO., SANDUSKY, O.		
2476	†Fish, Phosphate and Potash, General Grower.	S. S. Mosholder, Rockwood,	10.04
2544		E. J. Cass, Harbor Creek,	
2065	†Fish, Phosphate and Potash, Tobacco and Potato Food.	Clark Bros., Oil City,	9.05
2478		S. S. Mosholder, Rockwood,	
2540	Number One Formula,	E. J. Cass, Harbor Creek,	10.08
2066	†Lake Erie Guano with Phosphate and Potash.	Clark Bros., Oil City,	13.50
2479		S. S. Mosholder, Rockwood,	
	S. KENDERDINE & SONS, NEWTOWN, PA.		
3142	Kenderdine's Potato Phosphate,	T. S. Kenderdine & Sons, Newtown,	6.11
3144	Kenderdine's 4-8-5,	T. S. Kenderdine & Sons, Newtown,	6.39
	KEYSTONE BONE FERTILIZER CO., PHILADELPHIA, PA.		
2183	1915 Keystone General Manure,	Wm. M. Holbert, Warrington,	8.94
3443	1915 Supreme Potato and Truck Manure,	R. O. Sindell, Weatherly,	11.56
2796	1915 Keystone Standard Potato Manure,	B. L. Crowell, Ulysses,	8.34
2795	†1915 Keystone Royal Corn and Potato Manure.	B. L. Crowell, Ulysses,	9.74
3463		Chas. Schoffstall, Valley View,	
	KEYSTONE GRANGE EXCHANGE, MANSFIELD, PA.		
2016	†Granger's Special Crop Grower,	H. J. Hepler, Secy., Grange 1325, Pitman, R. D.	13.34
3268		L. A. Pidcoe, Linden, R. No. 3,	
2017	Granger's Special Vegetable Grower,	H. J. Hepler, Secy., Grange 1325, Pitman, R. D.	7.53
	KOLLER FERTILIZER CO., SEITZLAND, PA. WILLIAM LANCASTER, PHILA, PA.		
2864	Markle's Ammoniated Phosphate,	Sam. K. Hartman, York, R. D. No. 9	8.69
2485	Lancaster County Sulphate Mixture,	Henry Fogle, Bethlehem, R. No. 1,	8.31

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs., at point of selection.
Available.		Insoluble.	Total.		Present as Muriate.	Present as Sulphate.	Total.		Water Soluble.	Available.	Inactive Insoluble.	Total.			
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.				Found.	Guaranteed.		
9.58	8.00	1.57	11.15	8.75	2.31	.....	2.31	2.00	.96	1.32	§.29	1.61	1.64	25.77	26.00 ..... 21.20
7.90	8.00	.80	8.70	8.75	3.44	.....	3.44	3.00	2.01	2.32	‡.20	2.52	2.46	30.34	28.00
8.29	8.00	1.65	9.94	9.50	3.33	.....	3.33	3.00	.70	1.39	‡.44	1.83	1.66	27.94	25.00
8.61	8.00	1.42	10.03	9.50	2.58	.....	2.58	2.00	.73	1.28	§.53	1.81	1.66	26.32	25.00 23.00 .....
10.41	10.00	1 88	12.29	11.50	3.43	.....	3.43	3.00	.55	.97	§.42	1.39	1.24	28.10	26.00 23.00
7.82	8.00	2.03	9.85	9.50	1.51	.....	1.51	1.00	.59	.75	§.23	.98	.82	20.02	18.25
9.70	9.00	1.28	10.98	10.50	3.40	.....	3.40	3.00	.55	.75	§.27	1.02	.83	25.26	21.00 22.00 22.00
9.84	8.00	.61	10.45	9.50	2.62	.....	2.62	2.00	.44	.59	¶.25	.84	.42	22.74	18.00
9.57	9.00	1.75	11.32	10.00	2.40	.....	2.40	2.00	.76	1.32	‡.39	1.71	1.60	26.48	26.00 24.00
9.80	8.00	1.29	11.09	9.00	2.00	1.09	3.09	3 00	.55	1.33	‡.33	1.66	1.60	27.96	29.00
7.90	8.00	2.11	10.01	9.00	2.97	.....	2.97	2.00	.38	.65	§.30	.95	.80	22.88	21.75 20.50
8.39	8.00	1.64	10.03	9.00	3.06	.....	3.06	3.00.	.38	.67	§.27	.94	.80	23.31	26.00 23.00 24.00
10.89	8.00	.70	11.59	9.00	3.24	.....	3.24	3.00	.92	1.88	‡.40	*2.28	2.50	31.68	28.00 32.00
*7.66	8.00	1.24	8.90	9.00	3.26	.....	3.26	3.00	.93	1.32	§.35	1.67	1.65	26.05	25.00 26.50
8.25	8.00	.69	8.94	9.00	3.58	.....	3.58	3.00	.52	.70	§.20	.90	.82	23.61	27.00 22.50
8.84	9.00	85	*9.69	10.00	1.14	.....	1.14	1.00	.47	.73	‡.18	.91	.83	19.23	21.50
9.71	9.00	.74	10.45	10.00	2.60	.....	2.60	2.00	.78	1.05	§.22	1.27	1.25	24.30	27.00 21.00
11.60	8.00	.79	12.39	10.00	5.15	.....	5.15	5.00	.98	1.51	§.40	1.91	1.65	34.40	29.00
10.28	8.00	.68	10.96	10.00	5.14	.....	5.14	5.00	2.16	2.97	‡.41	3.38	3.30	40.00	33.00
8.24	8.00	1.13	*9.37	10.00	1.93	.....	1.93	1.00	.99	1.39	§.32	1.71	1.23	24.09	24.00
*7.62	8.00	1.17	*8.79	10.00	3.09	.....	3.09	2.00	1.91	2.52	‡.40	*2.92	3.28	31.39	33.00
8.15	7.00	1.62	9.77	8.00	2.55	.....	2.55	2 00	.80	1.35	§.53	*1.88	2.46	26.37	31.00
9.05	8.00	.69	*9.74	10.00	3.75	.....	3.75	3.00	.99	1.33	§.51	*1.84	2.05	28.98	30.10 27.00
9.22	9.00	1.42	10.64	10.00	3.70	.....	3.70	3.00	.66	.76	¶.21	.97	.82	25.28	21.50 23.00
8.82	8.00	.99	9.81	9.00	3.19	.....	3.19	3.00	1.91	2.16	§.20	2.36	2.47	30.04	25.00
9.39	8.00	2.58	11.97	9.00	3.08	.....	3.08	2.00	.58	1.34	§.54	1.88	1.65	29.07	22.00
8.76	8.00	94	9.70	9.00	2.07	5.19	7.26	7.00	1.35	1.84	§.33	2.17	2.46	38.58	.....

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.
*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	LANCASTER BONE FERTILIZER CO., LANCASTER, PA.		
2938	Connecticut Tobacco Wrapper Grower.	Frank Eshelman, Quarryville, R. D.	6.10
2550	National Crop Grower, ...	A. L. Veit, McKean, ...	7.35
2205	†Potato, Fruit and Vegetabe, ...	Josiah Flinchbaugh, Windsor, ...	6.09
2551		A. L. Veit, McKean, ...	
2262	†Lancaster Potato King Guano, ...	J. N. Walter, Stoyestown, ...	9.53
2288		Harvey Fike, Meyersdale, ...	
2458	†Potato, Tobacco and Truck Manure, ...	Harvey Fike, Meyersdale, ...	11.02
2567		Howard Replogle, Curryville, ...	
	THE LANCASTER CHEMICAL CO, LANCASTER, PA.		
3547	No. 3 Dissolved Animal Bone & Potash, ...	Jno. H. Weaver, East Earle, R. D. No. 2.	9.22
2935	No. 1 Tobacco and Vegetable, ...	H. M. Stauffer, Leola, ...	10.17
2936	No. 2 Dewey Brand, ...	H. M. Stauffer, Leola, ...	6.65
2766	No. 11 Keystone Brand, ...	C. S. Zimmerman, Bismark, ...	7.76
2941	No. 19 Potato Special, ...	Harry C. Brackbill, Strausburg, ...	11.77
2460	No. 14 Wheat and Grass, ...	E. E. Boyer, Meyersdale, ...	6.21
	LEBANON FERTILIZER WORKS, LEBANON, PA.		
3251		W. W. Parker, Rohrsburg, R. No. 1,	
2031	†Levan's Royal Potash Compound Fertilizer	Edward Mayberry, Pine Grove, ...	7.28
3461		Jno. Runkle, Sec. Grange, Lakeside,	
2749		M. L. Bachman, Lebanon, ...	
2026	†Levan's Special Corn Fertilizer, ...	Horace Kintzle, Pine Grove, ...	6.04
3375		W. A. Bailets, Dauphin, ...	
3459	Levan's Special Truck Fertilizer, ...	John Runkle, Sec. Grange, Lakeside,	5.90
	LISTER'S AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.		
2197		W. L. Metzel, Red Lion, R. No. 2,	
2067	†Lister's Corn and Potato Fertilizer, ...	F. P. Allen & Co., Titusville, ...	9.39
2468		S. J. Ringler, Elk Lick, ...	
2467	†Lister's Revised New York Special Fertilizer.	S. J. Ringler, Elk Lick, ...	9.76
2931		Geo. Bard, Leacock, ...	
3448	Lister's Oneida Special, ...	G. Watts & Son, Hawley, ...	7.16
2502	†Lister's Revised Corn and Potato No. 2	Arndt & Redline, Curryville, ...	
2743	Fertilizer.	Howard Weber, Hellertown, R. D. No. 5.	10.62
3117	†Lister's Revised Potato Manure, ...	Sylvester Garr, Easton, R. D. No. 4,	8.26
3150		W. E. Ervin, Somerton, ...	
2742	Lister's Revised Special 10% Potato Fertiizer.	Howard Weber, Hellertown, R. D. No. 5.	8.38
2198		W. L. Wetzel, Red Lion, R. No. 2,	
2068	†Lister's Special Crop Producer, ...	F. P. Allen & Co., Titusville, ...	9.61
2500		Arndt & Redline, Curryville, ...	
2933	Lister's Special Tobacco Fertilizer.	Geo. Bard, Leacock, ...	9.82
2720	†Lister's Success Fertilizer, ...	Zehner Bros., Bloomsburg, ...	10.08
3290		Dekin & Ash, Susquehanna, ...	
2501	†Lister's U S. Super Phosphate, ...	Arndt & Redline, Curryville, ...	8.89
3260		R. Savidge, Turbotville, R. D., ...	
2744		Howard Weber, Hellertown, R. No. 5	
2199	†Lister's Valley Brand Fertilizer, ...	W. L. Metzel, Red Lion, R. No. 2,..	8.55
3329		J. R. Hanks, Springboro, ...	
	FREDERICK LUDLAM CO., BALTIMORE, MD.		
2695		Wm. Albright, Cochranville, ...	
2220	†Ludlam's Cecrops Fertilizers C. & G. Brand.	Ben Stoner, Hellam, ...	8.71
2835		Shettig Bros., Ebensburg, ...	
2238	†Ludlam's Cecrops Fertilizers Harvest Queen.	Sechrist & Ihrig, York, R. D., ...	7.80
2696		Wm. Albright, Cochranville, ...	
2218	†Ludlam's Cecrops Fertilizers Special Guano.	Ben Stoner, Hellam, ...	6.13
2863		Sechrist & Ihrig, York, R. D., ...	
2219	†Ludlam's Cecrops Fertilizers Revised Spring Special.	Ben Stoner, Hellam, ...	8.27
3125		Wm. Albright, Cochransville, ...	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. ratiag.	Selling price of 2,000 lbs., at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as Muriate.	Present as Sulphate.	Found.	Guaranteed.	Water Soluble.	Available.	Inactive Insoluble.	Found.	Guaranteed.		
6.05	5.50	.39	6.44	6.50	2.40	2.21	*4.61	5.50	1.66	2.00	¶.57	2.57	2.47	31.58	35.00
8.06	8.00	.82	8.88	9.00	1.26	.....	1.26	1.00	.17	.36	¶.11	.47	.41	16.66	21.00
7.93	7.00	.51	8.44	8.00	3.04	.....	3.04	3.00	.46	.78	§.22	1.00	.82	22.58	22.00 / 24.00
10.30	10.00	.76	11.06	11.00	5.83	.....	5.83	5.00.	1.42	1.68	§.30	1.98	1.65	35.10	34.00 / 34.00
10.11	10.00	2.00	12.11	11.00	3.08	.....	3.08	3.00	1.10	1.45	§.33	1.83	1.65	29.22	27.00 / 27.00
*9.18	10.00	.75	*9.93	11.00	.04	3.87	3.91	3.00	1.19	1.37	§.14	1.51	1.65	28.77	24.00
8.86	7.50	32	9.18	8.50	.05	4.20	4.25	3.00	1.15	2.02	§.66	*2.68	2.88	34.53	32.00
9.04	8.00	1.45	10.49	9.00	.08	3.96	4.04	3.00	.46	1.00	‡.31	1.31	1.03	28.39	24 00
7.52	7.00	.41	7.93	8.00	.04	1.49	1.53	1.00	1.03	....	.....	1.17	.82	20.16	20.00
9.38	9.00	1.02	10.40	10.00	3.11	.....	3.11	3.00	.70	1.31	‡.50	1.81	1.85	27.87	28.00
9.26	8.00	2.45	11.71	9.00	1.79	.....	*1.79	2.00	.55	.90	‡.24	1.14	.82	19.15	20.00
9.72	8.00	.36	10.08	9 00	2.23	.....	2.23	2.00	1.32	1.51	§.28	1.79	1.65	26.11	22.25 / ..... / 22.00 / .....
*7.41	8.00	1.53	8.94	9.00	2.06	.....	2.06	2.00	.80	.92	¶.22	1.15	.82	21.24	18.00 / 21.00
6.98	7.00	1.72	8.70	8.00	4.26	.....	*4.26	6.00	1.62	1.88	§.21	2.09	1.65	29.77	26.75
7.98	8.00	1.31	9.29	9.00	3.67	.....	3.67	3.00	1.12	1.37	§.32	1.69	1.65	27.38	24.00 / 26.00
*8.27	9.00	1.40	*9.67	10.00	3.06	.....	3.06	3 00	.67	.85	§.20	1.05	.82	23.52	26.25 / 24.00 / 23.00
*6.67	7.00	2.20	8.87	8.00	1.14	.....	1.14	1.00	.51	.72	§.20	.92	.82	17.90	20.00
10.14	10.00	1.91	12.05	11.00	3.50	.....	3.50	3.00	1.13	1.51	§.35	1.86	1.65	30.00	25.00 / 25.00
10.20	10.00	1.85	12.05	11.00	3.31	.....	3.31	3.00	2.31	2.87	‡.37	3.24	3.29	36.02	..... / 35.00
10.09	10.00	1.40	11.49	11.00	2.68	.....	2.68	2.00	.82	1.42	.49	1.91	1.65	28.34	25.00
7 21	7.00	1.33	8.54	8.00	1.49	.....	1.49	1.00	.64	.80	§.21	1.01	.82	19.15	18.50 / 20.00 / 18.00
8.26	8.00	1.39	9.65	9.00	3.59	.....	3.59	3.00	1.05	1.82	‡.49	2.31	2.06	30.33	27.00
9.84	9.00	1.71	11.55	10.00	2.12	.....	2.12	2.00	.75	1.15	§.40	1.55	1.23	25.44	24.00 / 25.00
8.01	8.00	1.72	9.73	9.00	2.19	.....	2.19	2.00	.87	1.08	§.25	1.33	1.03	23.08	17.00 / 20.00
7.99	8.00	1.85	9.84	9.00	2.97	.....	2.97	3.00	.66	.86	§.22	1.08	.82	23.53	25.00 / 21.50 / 23.00
9.90	8.00	.80	10.70	9.00	1.90	.....	1.90	2.00	.48	....	.....	.65	.41	17.97	18.00 / 18.00
*7.78	8.00	1.25	9.03	9 00	2.10	.....	2.10	2.00	.67	.79	§.15	.94	.82	20.64	22.00 / 19.50 / 20.00
8.53	8.00	1.02	9.55	9.00	3.32	.....	3.32	3.00	1.37	1.58	§.19	1.77	1.65	27.28	23.50 / 25.00
9.08	9.00	1.12	10.20	10.00	3.49	.....	3.49	3.00	.57	.71	§.15	.86	.82	24.14	21.25 / 21.00

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.

*Constitutents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	THE MAPES FORMULA & PERUVIAN GUANO CO., NEW YORK.		
3542	The Mapes Average Soil Complete Manure,	W. H. Muth & Co., Lititz,	8.41
3470	The Mapes Complete Manure 10% Potash,	A. F. Kimmel, Orwigsburg,	7.77
2956	The Mapes Corn Manure,	W. H. Muth & Co., Lititz,	8.91
2048	The Mapes Economical Potato Manure,	P. H. Updegrave, Valley View,	8.62
2955	†The Mapes General Crop Brand,	W. H. Muth & Co., Lititz,	5.58
3101		Andrew Wolf, Stroudsburg,	
2046	†The Mapes Potato Manure,	P. H. Updegrave, Valley View,	9.57
2171		Hilles & Taggart, Norristown,	
3574	The Mapes Tobacco Manure Wrapper Brand	Jos. K. Shultz, Washingthon Boro., R. No. 1.	7.80
3541	The Mapes Tobacco Starter Improved,	W. H. Muth & Co., Lititz,	8.52
2172	The Mapes Top Dresser Improved Full Strength.	Hilles & Taggart, Norristown,	4.84
	MARTIN FERTILIZER CO., PHILADELPHIA, PA.		
2509	Martin's Bull Head Fertilizer,	Farmer's & Consumers Commercial Union, Troy.	6.40
2129	Martin's Claremont Vegetable Grower,	C. K. Shenk, Lancaster,	6.14
2450		W. S. Kerstetter, Secy., Sunbury, R. No. 2.	
2318	†Martin's 1-8-3,	David Reigel, Jonestown, R. No. 2,	7.20
2859		J. A. Brinker, Greensburg, R. No. 3,	
2344		Edwin Hauck, Bangor,	
2317	†Martin's Special Compound,	David Reigel, Jouestown, R. No. 2,	7.90
2453		W. S. Kerstetter, Secy., Sunbury, R. No. 2.	
2346	†Martin's Sure Grower,	Edwin Houck, Bangor,	10.47
2590		Biglerville Warehouse Co., Biglerville.	
2605	†Martin's 2-8-3,	Amendes Watring, Schencksville,	7.25
3046		J. C. Leib & Co., Stewartstown,	
	THE MILLER FERTILIZER CO., BALTIMORE, MD.		
2762	Club Brand,	John S. Shiffer, Derry Church, R. No. 1.	4.29
2600		Biglerville Warehouse Co., Biglerville.	
2438	†Farmers' Profit,	Walter & Frederick, Montandon,	8.45
2987		Geo. L. Schell, Vicksburg,	
2454	No. 1 Club Brand,	Reed & Erdman, Paxinos,	5.06
2594	No. 1 Harvest Queen,	Biglerville Hdw. Co., Biglerville,	7.19
2875		J. L. Gemmill, Woodbine,	
2455	†Pimlico,	Reed & Erdman, Paxinos,	5.28
2940		E. R. Witmer, Lampeter,	
3480	Potato and Vegetable Grower,	Geo. W. Bennett, Williamsport, R. No. 2.	3.71
2880	Special Tobacco Grower,	B. F. Pyle, Bridgeton, R. No. 1,	4.66
3035	†W. G. Phosphate,	J. P. Schuchart, New Freedom,	3.62
3313		M. T. Harkins, Hickory Hill,	
	NASSAU FERTILIZER CO., NEW YORK.		
3058	Special General Favorite,	C. M. Grammes, Trexlertown,	8.72
3066	Nassau Special,	Lewis Husted, Dallas,	7.91
	NITRATE AGENCIES CO., NEW YORK.		
2102	Peruvian Guano,	Sam'l R. Wenger, Bareville, R. No. 1.	17.25
	G. OBER & SONS CO., BALTIMORE, MD.		
2398		J. Wagner Geise, Bellefonte,	
2286	†Ober's Harvest King Compound,	Walter Hay, Berlin,	9.77
2589		D. Blocher & Co., Gettysburg,	
2397	Special Compound for Tobaeco,	J. Wagner Geise, Bellefonte,	7.35

†Composite sample.

LIZERS--Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs., at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as Muriate.	Present as Sulphate.	Found.	Guaranteed.	Water Soluble.	Available.	Inactive Insoluble.	Found.	Guaranteed.		
7.29	7.00	1.63	8.92	.....	.08	5.14	5.22	5.00	3.66	4.05	§.43	4.48	4.12	44.22	40.00
4.39	3.00	1.28	5.67	5.00	10.99	.....	10.99	10.00	2.39	2.54	¶.24	2.78	2.06	44.17	.....
*6.29	8.00	4.33	10.62	10.00	.08	6.38	6.46	6.00	2.12	2.55	§.46	3.01	2.47	40.51	39.00
4.00	4.00	2.50	6.50	6.00	1.73	6.58	8.31	8.00	2.64	2.95	§.33	3.28	3.29	42.76	35.00
8.11	8.00	2.97	11.08	10.00	2 21	.....	2.21	2.00	1.44	1.68	§.37	2.05	165	36.98	26.00 / 32.00
8.13	8.00	2.42	10.55	9.00	.12	6.04	6.16	6.00	3.32	3.83	§.34	4.17	3.71	45.81	38.00 / 44.00
4.45	.....	2.63	7.08	4.50	3.20	7.79	10.00	10.50	3.60	5.33	‡.98	6.31	6.18	62.72	49.00
6.10	6.00	2.96	9.06	8.00	.04	2.29	2.33	1.00	2.78	3.61	§.84	4.45	4.12	36.96	39.00
6.30	5.00	1.92	8.22	8.00	1.73	1.88	*3.61	4.00	9.11	9.57	‡.23	9.80	9.88	63.48	59.00
9.49	8.00	2.28	11.77	.....	2.93	.....	2.93	3.00	1.77	2.24	§.39	2.63	2.47	32.14	28.00
8.46	7.00	2.08	10.54	.....	4.87	.....	4.87	5.00	1.01	1.67	‡.41	*2.08	2.47	32.49	.....
8.43	8.00	1.82	10.25	.....	3.03	.....	3.03	3.00	.54	.80	§.24	1.04	.82	23.89	20.00 / 18.75 / 20.00
8.18	8.00	2.40	10.58	.....	5.26	.....	5.26	5.00	1.05	1.46	§.36	1.82	1.65	31.86	25.50 / 24.00 / 24.00
9.23	8.00	1.11	10.34	.....	2.31	.....	2.31	1.00	.52	.69	¶.34	1.03	.82	21.53	18.00 / 18.00
8.30	8.00	.80	9.10	.....	3.14	.....	3 14	3.00	1.44	1.65	§.23	1.88	1.65	27.36	23.00 / 24.00
9.56	8.00	.55	10.11	8.50	.84	.....	.84	.50	.33	.57	‡.12	.69	.41	18.19	16.50
9.17	9.00	.51	9.68	9.50	3.25	.....	3.25	3.00	.63	.70	§.17	.96	.82	23.89	24.50 / 22.00 / 22.00
8.01	8.00	.66	8.67	8.50	2.47	.....	2.47	2.00	.19	.32	¶.24	.56	.42	19.42	20.00
9.21	9.00	.44	9.65	9.50	2.99	.....	2.99	2.75	.77	.92	§.21	1.13	1.03	24.26	24.50
8.09	8.00	1 08	9.17	8.50	3.48	.....	3.48	3.00	1.04	1.32	§.30	1.62	1.65	26.64	23.25 / 26.00 / 27.00
8.90	9.00	1.12	10.02	9.50	1.49	.....	1.49	1.50	1.10	1.40	§.29	1.69	1.65	23.76	25.00
8.78	8.00	.50	9.28	8.50	1.65	.....	1.65	1.00	1.03	1.34	§.29	1.63	1.65	23.46	22.00
7.04	7.00	.48	7.52	7.50	.89	.....	.89	.50	.25	.36	§.16	.52	.41	15.08	16.00 / 20.00
8.88	8.00	.96	9.84	9.00	3.13	.....	3.13	3.00	.70	.85	§.12	.97	.82	23.64	22.50
9.38	9.00	1.19	10.57	10.00	3.46	.....	3.46	3.00	1.87	2.32	§.34	2.66	2.47	32.54	.....
10.98	10.00	1.73	12.71	11.00	2.68	.....	2.68	2.00	2.47	9.96	‡.87	10.83	10.69	70.10	77.00
10.47	9.00	1.29	11.76	10.00	3.29	.....	3.29	3.00	1.22	1.58	§.36	1.94	1.65	30.06	..... / 27.00 / 24.00
8.47	8.00	1.14	9.61	9.00	3.73	.44	4.17	3.00	1.66	2.05	§.43	2.48	2.47	32.53	.....

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.
*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	OXFORD PACKING WORKS, OXFORD, PA.		
3319	O. P. W. No. I,	J. C. Fisher, Cochranville, R. No. 1,	8.85
3320	O. P. W. No. II,	J. C. Fisher, Cochranville, R. No. 1,	10.54
	PATAPSCO GUANO CO., BALTIMORE, MD.		
2359	†Special Columbian Guano for Truck, Potatoes and Tobacco.	Harry Rader, Easton, R. No. 2,	8.58
3243		E. H. Snyder, Dalton,	
2260	†Coon Brand Guano,	P. J. Blough's Bros., Hooversville,	
2206		J. W. Flinchbaugh, Windsor,	8.58
2341		Chas. Shimmel, Ackermansville,	
3250	Patapsco Coru and Tomato Fertilizer,	G. H. Dildine, Orangeville,	10.89
3381	†Grange Mixture,	Jos. Burkholder, Hummelstown,	
2528		Jas. Siager, Westfield,	9.37
3286	†Patapsco Money Maker,	Dan Ringrose, Cadis,	
3407		J. B. Lightner, Laysville,	7.71
3409		C. S. Bruner, New Bloomfield,	
2527	Patapsco O. K. Phosphate,	Jas. Siager, Westfield,	8.81
3410	Patapsco Special Potato Manure,	C. S. Brunner, New Bloomfield,	10.96
2261	Sea Gull Guano,	P. J. Blough's Bros., Hooversville,	10.55
2215	†Patapsco Special Early Trucker,	H. C. Kocher, Wrightsville,	5.92
2439		Walter & Frederick, Montandon,	
3426	Patapsco Special Prolific Potato Phosphate,	Summitt Lumber Co., Clarks Summit.	7.18
2216	†Patapsco Special Tobacco and Potato Fertilizer.	H. C. Kocher, Wrigbtsville,	8.47
3382		Jas. Burkholder, Hummelstown,	
	PETROSKEYS SONS, LATROBE, PA.		
2849	Petroskeys Complete Fertilizer,	O. H. Saxman, Latrobe,	3.98
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.		
2432	†Levering's Ammoniated Bone,	A. F. Stutzman & Co., Johnstown,	14.06
3211		R. S. Brown, Morris,	
2234	Piedmont Economy,	H. H. Loose, Menges Mills,	7.38
2604	Plow Braud,	Amendes Wotring, Schencksville,	8.81
2603	Royal Ammoniated Bone and Potash,	Amendes Wotring, Schencksville,	6.51
	PITTSBURGH PROVISION AND PACKING CO., PITTSBURGH, PA.		
2080	Corn and Potato Fertilizer,	W. J. Gibson, Hydetown,	6.00
3336	Lawn Fertilizer,	R. G. Allison, Ambridge,	3.85
3007	Special Potato Fertilizer,	Weddele & Sutton, West Newton,	3.52
	POLLOCK FERTILIZER CO., BALTIMORE, MD.		
2217	Ammoniated Super Phosphate,	J. W. Gable, Hellam,	9.85
2225	Owl Brand Guano Revised,	J. H. Heely, Littlestown,	8.60
3127	Special Potato and Tobacco Fertilizer Revised.	Harvey Spencer, Cochranville,	8.42
2558	†Pollock Fertilizer Co's Special Wheat and Corn Fertilizer.	Frank Oster, Osterburg,	8.11
2204		S. A. Barshinger, Red Liou, No. 2,	
2566		J. L. Longenecker, Woodbury,	
	PUGH & LYONS, OXFORD, PA.		
2654	Bone Phosphate,	C. R. Kirk & Co., Oxford,	4.91
2655	B. R. P. Phosphate,	C. R. Kirk & Co., Oxford,	5.81
2652	Potato Phosphate,	C. R. Kirk & Co., Oxford,	7.65
	RAMSBURG FERTILIZER CO., FREDERICK, MD.		
3360	Old Virginia Compound,	Frank Miller & Son, Greencastle, R. No. 2.	5.93
	RASIN MONUMENTAL CO., BALTIMORE, MD.		
2110	†Rasin's Capital Crop Compound,	Geo. E. Buck, Krumsville,	8.31
2628		Jacob Miller, Somerset, R. No. 5.	
2118	Rasin's Champiou Potato and Vegetable Manure.	L. A. Geiger, Joanna,	7.25

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs. at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Water soluble.	Available.	Inactive insoluble.	Found.	Guaranteed.		
9.39	7.50	1.38	10.77	8.00	3.53	.....	3.53	3.00	.91	1.87	‡.60	2.47	2.47	31.95	27.00
10.75	8.50	2.15	12.90	9.00	3.00	.....	3.00	3.00	.49	.95	§.51	1.46	1.44	27.84	25.00
*7.73	8.00	1.09	8.82	9.00	3.34	.....	3.34	3.00	1.40	2.04	§.48	2.52	2.47	30.12	..... or 29.00
9.11	9.00	.60	*9.71	10.00	3.63	.....	3.63	3.00	.58	.73	§.18	.91	.82	24.44	25.00 or .....
9.45	9.00	1.16	10.61	10.00	2.15	.....	2.15	2.00	1.03	1.21	§.20	1.41	1.23	24.24	..... or 21.00 or 25.00
8.09	8.00	1.66	9.75	9.00	2.23	.....	2.23	2.00	.94	1.36	§.38	1.74	1.65	25.06	26.00
8.58	8.00	1.19	9.77	9.00	2.59	.....	2.59	2.00	.69	.80	§.18	.98	.82	22.53	25.00 or ..... or 21.50
8.79	8.00	1.43	10.22	9.00	2.26	.....	2.26	2.00	.56	.76	§.22	.98	.82	22.15	22.00
*9.49	10.00	1.56	11.05	11.00	2.83	.....	2.83	3.00	1.40	1.64	§.18	1.82	1.65	27.73	27.00
8.10	8.00	1.21	9.31	9.00	1.24	.....	1.24	1.00	.68	.82	§.14	.96	.82	19.16	21.00
8.63	8.00	1.23	9.86	9.00	3.60	.....	3.60	3.00	2.92	3.55	§.50	4.05	4.11	38.55	33.00 or 34.00
10.96	10.00	.51	11.47	11.00	3.03	.....	3.03	3.00	2.64	3.26	‡.32	3.58	3.29	37.14	31.25
8.00	8.00	1.49	9.49	9.00	3.27	.....	3.27	3.00	1.34	1.58	§.21	1.79	1.65	27.16	25.00 or 26.00
9.71	8.58	6.15	15.86	14.11	3.22	.....	*3.22	3.68	1.70	3.29	‡.87	4.16	3.39	41.54	30.00
8.96	9.00	.57	9.43	.....	3.22	.....	3.22	3.00	.41	.61	§.30	.91	.82	23.29	24.00 or 22.00
10.22	10.00	.32	10.54	.....	2.15	.....	2.15	2.00	.21	.33	§.13	.46	.21	17.68	16.50
9.17	8.00	.28	9.45	.....	2.52	.....	2.52	2.00	.44	.96	§.71	1.67	1.65	25.40	22.00
6.49	6.00	.38	6.87	.....	3.94	.....	3.94	3.00	.37	.59	¶.46	1.05	1.00	23.28	21.00
*8.06	9.00	1.35	*9.41	11.00	3.23	.....	3.23	3.00	.20	.77	§.56	1.33	1.43	24.98	27.00
7.49	4.00	6.31	*13.80	16.00	2.68	.....	2.68	1.50	.40	2.02	‡.72	2.74	2.87	32.23	40.00
10.64	9.00	.92	11.56	10.00	.11	7.50	7.61	7.00	.45	1.31	.45	1.76	1.64	39.70	30.00
8.57	8.00	.89	9.46	9.00	2.21	.....	2.21	2.00	1.32	1.54	§.21	1.75	1.65	24.99	.....
8.93	8.00	.38	9.31	9.00	2.15	.....	2.15	2.00	.40	....	.....	.61	.41	19.75	18.00
8.09	8.00	1.57	9.66	9.00	3.40	.....	3.40	3.00	1.42	1.64	§.17	1.81	1.65	27.58	24.00
8.18	8.00	1.25	9.43	9.00	2.39	.....	2.39	2.00	.62	.75	§.18	.93	.82	21.61	16.00 or 20.00 or 20.00
10.11	6.00	5.64	15.75	11.00	2.17	.....	2.17	2.00	.44	1.50	‡.31	1.81	1.65	28.81	27.50
9.92	7.00	5.33	15.25	.....	3.32	.....	3.32	2.00	.49	1.28	‡.41	1.69	.82	30.37	25.50
11.77	7.00	2.18	13.95	.....	3.81	.....	*3.81	6.00	.22	.66	§.31	.97	.82	28.11	28.50
9.72	8.00	2.33	12.05	10.00	3.52	.....	3.52	3.00	.56	.75	§.26	1.01	.81	25.96	22.00
9.57	9.00	1.26	10.83	10.00	3.85	.....	3.85	3.00	.82	.93	§.17	1.10	.82	26.52	21.00 or 22.50
9.46	8.00	1.07	10.53	9.00	2.34	.....	2.34	3.00	2.23	2.63	‡.28	*2.91	3.29	31.48	30.00

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.
*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	RASIN MONUMENTAL CO., BALTIMORE, MD.—Continued.		
2876	†Rasin's Empire Guano Special,	J. L. Gemmill, Woodbine,	12.79
3095		H. B. Low & Son, Orangeville,	
2627	Rasin's Great Ammoniated Crop Compound,	Jacob Miller, Somerset, R. No. 5,	8.64
2699	Rasin's Nitro Top Dresser,	E. A. Slagle, Paxinos,	4.39
2912	†Rasin's Quality Compound,	Siegfried & Schwoyer, Kempton,	9.07
2968		W. W. Book, Port Royal,	
2867		E. S. Shire, Glatfelters,	
2041	†Rasin's Wheat, Corn and Oats Mixture,	S. A. Haas, Valley View,	7.51
2966		W. W. Book, Port Royal,	
2615	†Rasin's Wm. Penn Crop Grower,	Edward Leibold, Saegersville,	
2678		C. S. Walker & Co., Chadd's Ford Junction.	8.55
	READING BONE FERTILIZER CO., READING, PA.		
2133	Reading All Crop Special,	Isaac M. Stoltzfus, Elverson, R. No. 3.	7.94
2333	†Blood, Meat and Potash Mixture,	C. R. Bucher, Myerstown, R. No. 4,	6.79
3009		J. P. Sloterback, Fayette City,	
2930		J. H. Reitz, Millway,	
2609	†Farmers' Choice,	W. J. Schmick & Son, Garmansville,	5.63
3241		S. L. Smith, Mill Creek,	
2132	†Farmers' Tankage and Potash for Corn, Grain and Grass.	Isaac M. Stoltzfus, Elverson, R. No. 3.	
2009		Chas. Maurer, Hepler,	9.33
2649		Warren W. Moses, Exton,	
2928	Gilt Edge Potato and Tobacco Grower,	J. H. Reitz, Millway,	....
2608	†Golden Harvest,	W. J. Schmick, Garmansville,	9.22
2334		C. R. Bucher, Myerstown, R. No. 4,	
2929		J. H. Reitz, Millway,	
2335	Reading Prize Winner,	C. R. Bucher, Myerstown, R. No. 4,	7.24
2112	†Schuylkill Valley Favorite for Grain and Grass.	Schlegel, Adam & Co., Fleetwood,	5.97
2011		Chas. Maurer, Hepler,	
2651		Warren W. Moses, Exton,	
2650	†Reading Special Potato and Tobacco Manure.	Warren W. Moses, Exton,	8.96
2113		Schlegel, Adam & Co., Fleetwood,	
3010		J. P. Sloterback, Fayette City,	
3167	Tobacco and Truck Special,	A. K. Kulp, Pottstown,	5.35
2804	Truck, Fruit, Tree, Vine, Potato and Tobacco Grower.	Frank Littlefield, Coudersport,	6.01
	READING CHEMICAL CO., READING, PA.		
3163	Reading Big Crop Special,	John W. Root, Kimberton,	5.59
3165	Reading Grain Special,	John W. Root, Kimberton,	8.53
	ROBT. A. REICHARD, ALLENTOWN, PA.		
2337	Improved Top Dresser,	Wm. Mittman, Easton, R. No. 3,	5.85
2178	†Royal Phosphate,	Wm. Hall, Danboro,	6.97
2614		Chas. Toch, New Tripoli,	
	REICHARD HIDE AND TALLOW CO., ASHLAND, PA.		
2915	Farmer's Jewel,	Seigfried & Schwoyer, Kempton,	5.72
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.		
2361	†Royster's Corn and Hop Special Fertilizer.	J. N. Getz Co., Lock Haven,	9.41
3422		S. T. Ingham, Nicholson,	
2445	†Royster's Cuckoo Crop Grower,	E. J. Otto, Herndon, R. No. 1,	6.51
2399		J. S. Waite & Co., Bellefonte,	
2470		Richard Glotfelty, Salisbury,	
2320	†Royster's Dreadnought Fertilizer,	S. A. Phillippy, Schaefferstown, R. No. 1.	
2064		W. C. Work & Son, Cochranton,	....
2449	†Royster's Eldorado Compound,	D. L. Latsha, Red Cross,	
2170		L. W. Danerhower, Southampton,	8.56
2351		Lewis Stenigrabe, Mercer,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs. at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Water soluble.	Available.	Inactive insoluble.	Found.	Guaranteed.		
8.43	8.00	1.17	9.60	9.00	2.58	.....	*2.58	3.00	1.55	1.71	§.15	*1.86	2.47	26.30	22.00 22.25
13.49	12.00	1.21	14.70	13.00	3.53	.....	3.53	3.00	.60	.71	§.11	.86	.82	24.73	24.00
4.44	4.00	.29	*4.73	5.00	3.71	.....	3.71	3.00	8.08	...	.....	8.18	8.23	53.49	48.00
7.69	7.00	.89	8.58	8.00	2.88	.....	2.88	3.00	.88	.99	§.15	1.14	.82	22.93	21.00 21.50
8.18	8.00	1.44	9.62	9.00	2.08	.....	2.08	2.00	.52	....	.....	.64	.41	19.68	17.15 17.75 18.00
9.11	8.00	1.22	10.33	9.00	1.05	.....	1.05	1.00	.71	.87	§.14	1.01	.82	19.92	18.50 20.00
9.96	10.00	1.44	11.40	11.00	2.90	.....	2.90	3.00	1.23	1.52	‡.18	1.70	1.64	27.72	25.00
*8.97	10.00	1.25	*10.22	11.00	2.12	.....	2.12	2.00	1.21	1.53	‡.16	1.69	1.64	25.09	22.50 26.00
8.63	8.00	.75	9.38	9.00	7.77	.....	*7.77	8.00	.83	.95	§.13	1.08	.82	33.38	35.00 25.00 ..... 22.00
10.24	10.00	.94	11.18	11.00	2.89	.....	2.89	3.00	.56	.73	§.18	.91	.82	24.10	22.00 26.00
12.81	12.00	1.28	14.09	13.00	3.52	.....	3.52	3.00	1.33	1.41	¶.15	1.56	1.64	31.21	28.00
10.62	10.00	1.13	11.75	11.00	8.02	.....	8.02	8.00	1.21	1.39	§.15	1.54	1.64	37.88	33.50 33.00 34.00
9.00	9.00	1.79	10.79	10.00	3.00	.....	3.00	3.00	1.73	2.19	‡.26	2.45	2.46	30.66	28.50
7.40	7.00	.70	8.10	8.00	2.50	.....	2.50	2.00	.28	....	.....	.49	.41	18.78	18.00 16.00 19.50
11.90	12.00	1.17	13.07	13.00	3.51	.....	3.51	3.00	.65	.77	§.13	.90	.82	26.91	26.00 25.00 28.00
6.51	6.00	1.06	7.57	7.00	2.78	.....	*2.78	3.00	1.82	2.31	‡.14	2.45	2.46	27.64	30.00
8.77	8.00	1.05	9.82	9.00	3.57	.....	3.57	3.00	2.48	2.91	‡.29	3.20	3.29	34.62	33.00
7.91	8.00	.99	8.90	.....	3.98	.....	3.98	4.00	1.26	1.41	§.23	1.64	1.65	27.68	30.00
7.20	7.00	.54	7.74	.....	1.88	.....	1.88	2.00	.34	....	.....	.52	.41	17.30	21.00
6.07	6.00	.65	6.72	7.50	4.19	.....	4.19	4.00	5.71	6.56	‡.39	6.95	6.58	50.47	42.00
7.09	7.00	.80	*7.89	8.50	2.03	.....	2.03	2.00	.32	.60	§.38	.98	.82	19.93	20.00 19.00
9.97	8.00	1.74	11.71	10.00	2.32	.....	2.32	2.00	.43	1.42	‡.52	1.94	1.64	27.78	.....
7.96	8.00	2.16	10.12	8.50	3.30	.....	3.30	3.00	1.41	1.87	§.32	2.19	2.06	29.35	28.00 29.00
8.27	8.00	1.43	9.70	8.50	1.27	.....	1.27	1.00	.63	.85	‡.11	.96	.82	19.41	18.00 20.00 19.65 21.70
8.40	8.00	1.58	9.98	8.50	2.27	.....	2.27	2.00	1.29	1.61	‡.14	1.75	1.65	25.30	24.75
10.64	10.00	1.48	12.12	10.50	3.01	.....	3.01	3.00	1.37	1.71	‡.13	1.84	1.65	29.26	25.00 28.00 28.00

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.
*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	F. S. ROYSTER'S GUANO CO., BALTIMORE, MD.—Continued.		
2521	Royster's Favorite Compound,	Braman & Swan, Nelson,	9.78
5981	†Royster's Fish, Flesh and Fowl,	Jno. Strickler, Mifflinburg,	5.43
3200		R. J. Dunham, Wellsboro,	
2429	Hosteter's Special Fruit and Vegetable Mixture.	Abram Hostetler, Johnstown, R. No. 3.	5.67
2332	†Royster Utopia Compound,	S. A. Phillippy, Sehaefferstown, R. No. 1.	6.88
2035		Thos. Kuntzleman, Orwin,	
2491		John Kunkel, Bath,	
	SCHAAL SHELDON FERTILIZER CO., BUFFALO, N. Y.		
2089	Schaal's Special Corn and Potato,	Brooklyn Milling Co., Spartanburg,	6.52
2087	Special Guano,	Brooklyn Milling Co., Spartanburg,	8.25
	SCOTT FERTILIZER CO., ELKTON, MD.		
2120	†Scott's Corn and Oats Grower,	Levi Beiler, Elverson, R. No. 3,	7.13
2726		Abraham Burlinger, Kunkletown,	
3172	Scott's Sure Growth Compound,	S. Applegate, Bethlehem,	7.76
2657	†Scott's Potato Grower,	Mackey & Yerkes, Oxford,	8.42
2122		Levi Beiler, Elverson, R. No. 3,	
2705		Abraham Burlinger, Kunkletown,	
2656	†Scott's Sure Growth Super Phosphate,	Mackey & Yerkes, Oxford,	7.93
2121		Levi Beiler, Elverson, R. No. 3,	
2745		Elias S. Brubaker, Richland,	
	M. L. SHOEMAKER & CO., PHILADELPHIA, PA.		
2173	†Swift Sure Guano for Tomatoes, Truck and Corn.	Hilles & Taggart, Morristown,	8.04
2130		Stephen M. Stoltzfus, Morgantown,	
2616		Frank Hoffman, Neffsville,	
2737	Shoemaker's New Jersey Special for Oats,	Richard Fogel, Heckertown,	5.73
2174	Swift Sure Phosphate for general use,	Hilles & Taggart, Norristown,	9.29
2131	Swift Sure Phosphate for Tobacco,	Stephen M. Stoltzfus, Morgantown,	6.40
3149	Swift Sure Special 10% Potato Fertilizer No. 1.	W. E. Erwin, Somerton,	5.76
2904	Twenty Three Dollar Super Phosphate,	N. F. Poole, Ruffsdale,	7.57
	F. A. SIMON, MAUD, PA.		
3299	Farmers' Favorite High Grade Potato Special Phosphate.	F. A. Simon & Bro., Cornwells,	8.85
	H. H. SMYSER, YORK, PA.		
2865	Ammoniated Chicago Fertilizer,	Sam. K. Hartman, York, R. D. No. 9.	6.22
	SWACKS FERTILIZER WORKS, INC., DUBOIS, PA.		
2053	Swacks Corn Special Fertilizer,	Sanford & Rumminger, Franklin,	8.25
2052	Swacks General Crop Grower,	Sanford & Rumminger, Franklin,	3.39
2054	Swacks Grain and Corn Fertilizer,	Sanford & Rumminger, Franklin,	9.44
2051	Swacks Grain Grower,	Sanford & Rumminger, Franklin,	8.44
2050	†Swacks Special Potato Fertilizer,	Sanford & Rumminger, Franklin,	11.45
2419		Chas. Yeackle, Patton,	
	SWIFT & COMPANY, BALTIMORE, MD.		
2206	Swift's Champion Wheat and Corn Grower,	Peter Kline, Morris,	10.77
3337	Swift's Pure Continental Beet Special,	R. G. Young Sons, New Galilee,	6.88
2740	†Swift's Pure Corn and Wheat Grower,	I. V. Baehman, Hellertown,	7.25
2041		Jas. Fulton & Son Co., Stewartstown	
2584	†Swift's Pure Corn, Wheat and Oat Special.	J. R. Weaver & Bro., New Oxford,	8.56
2366		Albert C. Myers, Lock Haven,	
2931		J. H. Reitz, Millway,	
2189	†Swift's Pure Diamond. A Vegetable, Tobacco and Fruit Grower.	Thos. Haines Co., Malvern,	5.71
2134		Isaac M. Stoltzfus, Elverson, R. No. 3.	
2212		H. C. Kocher, Wrightsville,	

†Composite sample.

LIZERS—Continued

Phosphoric Acid in 100 Lbs.					Potash in 100 Lbs.				Nitrogen in 100 Lbs.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Water soluble.	Available.	Inactive—Insoluble.	Found.	Guaranteed.		
9.95	10.00	1.21	11.16	10.50	2.26	.....	2.26	2.00	1.49	1.66	‡.08	1.74	1.65	26.50	25.00
8.06	8.00	1.85	9.91	8.50	3.11	.....	3.11	3.00	1.12	1.42	§.22	1.64	1.65	26.38	.....
															.....
*8.26	8.50	9.89	18.15	17.00	4.17	.....	4.17	3.00	.24	1.12	‡.60	1.72	1.85	32.80	29.00
															26.75
8.51	8.00	1.96	10.47	8.50	3.33	.....	3.33	3.00	1.77	2.27	‡.23	2.50	2.47	31.23	28.00
															.....
*7.71	8.00	1.67	9.38	9.00	3.41	.....	3.41	3.00	1.15	1.45	‡.19	1.64	1.65	26.62	27.00
8.16	8.00	1.69	9.85	9.00	3.48	....	3.48	3.00	.59	.76	§.21	.97	.82	24.02	24.00
11.22	10.00	1.31	12.53	.....	1.83	.....	1.83	1.00	.21	.35	¶.24	.59	.42	18.66	17.50
															18.00
12.25	10.00	1.36	13.61	.....	3.77	.....	3.77	3.00	2.55	3.09	‡.30	3.39	3.30	39.24	.....
															27.00
11.18	10.00	2.20	13.38	.....	3.36	.....	3.36	3.00	.95	1.30	§.46	1.76	1.65	30.36	23.50
															24.00
															25.00
9.66	8.00	2.59	12.25	.....	3.67	.....	3.67	3.00	.77	1.43	‡.34	1.77	1.65	29.77	22.50
															.....
10.02	8.00	1.98	12 00	10.00	5.43	.....	5.43	3.00	1.24	1.71	‡.27	1.98	1.65	34.60	33.00
															27.00
															28.50
9.42	8.00	3.19	12.61	11.00	3.03	.....	3.03	2.00	.39	.99	§.52	1.51	.82	27.46	18.00
9.79	9.00	1.21	*11.00	12.00	3.46	.....	3.46	3.00	1.75	2.54	‡.44	*2.98	3.29	34.52	32.00
10.18	8.00	1.42	11.60	11.00	1.07	3.80	4.87	4.50	1.67	2.89	‡.40	3.29	3.29	40.11	35.50
10.84	6.00	1.64	12.48	8.00	3.99	.....	3.99	3.00	2.27	3.41	‡.54	3.95	3.30	41.13	34.00
9.14	6.00	2.96	12.10	9.00	2.48	.....	2.48	1.25	.59	1.07	§.47	1.54	1.03	26.22	22.00
*7.52	11.00	1.74	*9.26	13.00	10.35	.....	10.35	10.00	1.70	2.83	‡.47	*3.30	4.00	48.16	45.00
8.40	8.00	1.37	*9.77	10.00	2.08	.....	2.08	2.00	.40	.63	§.29	.92	.82	21.00	17.00
*9.46	10.00	.93	*10.39	11.00	1.91	.....	1.91	2.00	.31	.57	§.35	.92	.85	21.34	24.00
11.42	10.00	.85	12.27	11.00	1.19	.....	1.19	1.00	.23	.49	§.31	.80	.85	21.16	22.00
7.39	7.00	1.39	8.78	8.00	1.30	.....	1.30	1.00	.39	.82	§.47	*1.29	1.50	20.31	23.00
7.54	7.00	.51	8.05	8.00	.96	.....	.96	1.00	.23	.45	§.25	*.70	.85	16.57	19.00
8.64	8.00	1.72	10.36	9.00	2.97	.....	2.97	3.00	.69	1.03	§.38	*1.41	1.65	25.41	28.00
															24.50
13.05	12.00	1.87	14.92	.....	2.04	.....	2.04	2.00	.77	1.12	§.29	*1.41	1.65	27.61	29.00
8.30	8.00	1.06	9.36	.....	3.14	.....	3.14	3.00	.38	.60	§.30	.90	.82	22.92	23.00
10.29	10.00	1.66	11.95	.....	1.82	.....	1.82	2.00	.75	1.10	§.37	1.47	1.65	24.75	23.00
															24.50
															23.00
*10.64	11.00	1.64	12.28	.....	2.51	.....	*2.51	3.00	.61	.70	¶.20	.90	.82	24.09	22.00
															23.00
															28.00
7.83	8.00	1.59	9.42	.....	2.67	.14	2.81	3.00	1.66	1.96	§.38	2.34	2.47	28.66	.....
															26.75

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.

*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	SWIFT & CO., BALTIMORE, MD.—Continued.		
2167	†Swift's Pure Diamond W Vegetable and	L. W. Dauenhower, Southampton, ..	5.67
2607	Fruit Grower.	L. D. Leiby, Garmansville, ...	
2534	Swift's Pure Diamond X Fertilizer, ...	W. P. Rouse & Son. North East, ...	7.79
3158	Swift's Pure Farmer's Favorite, ...	W. J. Pratt & Sons, Wanaset, ...	4.09
2806	Swift's Pure Diamond K Grain Grower, ..	N. J. Leete, Coudersport, ...	9.72
3102	†Swift's Pure Market Garden Manure, ...	Harry Van Fleet, East Stroudsburg,	6.61
2531		W. P. Rouse & Son, North East, ...	
3153		Wm. C. Ball, Media, ...	
2268	†Swift's Pure Red Steer, ...	Hill & Walker, Shanksville, ...	5.64
2213		H. C. Koeher, Wrightsville, ...	
2364		Albert C. Myers, Lock Haveu, ...	
3287	Swift's Pure Regal Top Dresser, ...	J. F. Carl, Great Bend.	6.80
2456	†Swift's Reliable Grain Fertilizer, ...	Reed & Erdman, Paxinos, ...	4.28
2363		Albert C. Myers, Lock Haven, ...	
3162		John W. Root, Kimberton, ...	
3161	Swift's Pure Special Formula C, ...	John W. Root, Kimberton, ...	6.66
2094	Swift's Pure Super Phosphate, ...	Penn Distributing Co., Union City,	4.28
	J. M. TEMPLIN, HONEYBROOK, PA.		
2673	No. 4, Atlas Brand, ...	J. M. Templin, Houeybrook, ...	6.93
	I. P. THOMAS & SONS CO., PHILA., PA.		
2756	High Grade Potato Fertilizer, ...	Mouroe A. Wike, Kleinfelersville,	9.89
2019	†Improved Fertilizer, ...	J. K. Maurer, Pitman, R. D., ...	6.51
2200		J. H. Knisely, Red Lion, R. No. 2,	
2348	Normal Phosphate, ...	Wm. J. Moyer, Greenville, ...	10.12
3576	Scientific Tobacco Guano, ...	E. D. Leaman, Ronks, ...	6.22
2295	†Special High Grade Potato Fertilizer, ..	N. Guy Snyder, Aspers, ...	9.17
2355		Titus Baehman, Hellertown, ...	
3071		W. H. Braee, Dallas, ...	
2201	†Special Potato Fertilizer, ...	J. H. Kuisely, Red Lion, R. No. 2,	8.77
2018		J. K. Maurer, Pitman, R. D., ...	
2356		Titus Baehman, Hellertown, ...	
2316	Top Dresser, ...	Ed. Shuey, Liekdale, R. No. 1, ...	5.04
2314	Victor Potash Guano, ...	Ed. Shuey, Lickdale, R. No. 1, ...	9.61
2703	†Thomas Wheat and Corn Manure, ...	John Kase, Elyshurg, ...	8.54
2202		L. H. Knisely, Red Lion, R. No. 2,	
2760		E. S. Risser, Palmyra, R. No. 2, ..	
	JAMES THOMAS, WILLIAMSPORT, PA.		
3274	Thomas Special Compound for Wheat, Oats, Corn and Grass.	Thos. Green, Canton, ...	8.75
3275	Thomas Standard Brand Phosphate, ...	Thos. Green, Canton, ...	6.10
	TRENTON BONE FERTILIZER CO., TRENTON, N. J.		
2166	Keystone Potato, ...	Hobensack Bros., Ivyland, ...	8.84
3297	Special Corn Manure, ...	L. A. Howells, Morrisville, ...	9.78
3309	Farmer's Special Potato Mauure, ...	Wm. Hobensack, Ivyland, ...	9.01
3308	Tomato and Truck, ...	Wm. Hobensaek, Ivyland, ...	9.77
	JACOB TRINLEY & SONS, LINFIELD, PA.		
2689	Grain and Grass Grower, ...	A. M. F. Stiteler, Uwehland, ...	7.37
2688	Special Potato Manure, ...	A. M. F. Stiteler, Uwehland, ...	9.20
	F. W. TUNNELL & CO., INC., PHILADELPHIA, PA.		
3151	Complete Phosphate, ...	M. C. Miehener, Media, ...	7.92
3130	Complete Super Phosphate, ...	Geo. R. Watson, Embreeville, ...	7.77
2942	†Excelsior Phosphate, ...	Harry C. Breckbill, Strausburg. ...	5.94
3129		Geo. R. Watson, Embreeville, ...	
3143	Jersey Potato Manure, ...	Henry W. Satterwaite, Woodbourne,	8.41
2155	No. 1 Potato Manure, ...	Edw. Brinton & Sons, West Chester,	10.97
3138	No. 2 Potato Manure, ...	Jno. C. Rhoades & Co., Newton Square.	7.45
2156	Potato and Vegetable Manure, ...	Edw. Brinton & Sons, West Chester,	8.32
2152	Royal Fish Manure, ...	Edw. Brinton & Sons, West Chester,	8.21
3306	Sweet Potato Manure, ...	S. Carl Garner, Hatboro, ...	9.84
2154	Trucker's High Grade Fish Guano, ...	Edw. Brinton & Sons, West Chester,	8.91

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Lbs.					Potash in 100 Lbs.				Nitrogen in 100 Lbs.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Water soluble.	Available.	Inactive—Insoluble.	Found.	Guaranteed.		
8.13	8.00	1.38	9.51	.....	3.21	.....	3.21	3.00	1.02	1.23	¶.33	1.56	1.65	25.96	27.00 23.50
8.64	8.00	1.67	10.31	.....	3.49	.....	3.49	3.00	2.29	3.77	‡.78	4.55	4.11	40.87	34.50
9.30	9.00	1.67	10.97	.....	1.05	.....	1.05	1.00	.36	1.21	‡.52	1.73	1.65	23.70	22.50
*11.79	12.00	2.06	13.85	.....	.09	1.19	1.28	1.00	.44	.56	¶.23	.79	.82	19.51	25.00
*7.64	8.00	1.50	9.14	.....	3.17	.....	3.17	3.00	1.66	2.55	§.64	3.19	3.29	33.03	32.00 31.50 32.00 21.50
8.25	8.00	1.49	9.74	.....	2.25	.....	2.25	2.00	.86	1.12	¶.44	1.56	1.65	24.21	23.00 25.50
6.11	5.00	.77	6.88	.....	2.98	.....	2.98	3.00	4.75	4.86	‡1.58	*6.44	8.00	45.82	48.25
7.99	8.00	1.65	9.64	.....	.93	.....	.93	1.00	.44	.60	¶.32	.92	.82	28.44	18.00 21.50 21.00
12.87	12.00	2.92	15.79	.....	.08	.56	.64	.....	.70	1.23	‡.25	1.48	1.65	25.02	25.00
8.24	8.00	1.26	9.50	.....	2.52	.....	2.52	2.00	.77	1.39	‡.42	1.81	1.65	25.74	26.00
*8.86	10.00	.70	*9.56	11.00	.04	3.49	3.53	3.00	1.22	1.35	¶.21	1.56	1.65	28.32	.....
*10.06	11.00	.57	*10.63	11.50	3.39	.....	3.39	2.00	2.33	2.95	‡.25	3.20	2.88	35.29	.....
*9.60	10.00	.85	10.45	10.50	1.55	.....	1.55	1.00	.52	.71	§.19	.90	.82	20.72	20.00 19.00
9.97	8.50	1.12	11.09	9.00	2.37	.....	2.37	1.50	.62	.78	¶.28	1.06	1.00	23.52	20.00
10.83	10.00	1.04	11.87	10.50	.04	2.75	2.79	2.50	1.63	2.08	‡.29	2.37	2.45	31.72	28.00
9.22	9.00	.80	10.02	9.50	3.66	.....	3.66	3.00	2.65	3.30	‡.37	3.67	3.70	37.16	33.00 34.00 29.50
10.00	10.00	1.29	11.29	10.50	3.24	.....	3.24	3.00	1.34	1.62	§.26	1.88	1.65	29.32	24.00 24.00 28.00
1.49	.....	.22	1.71	.....	3.62	.....	3.62	2.00	7.52	7.59	¶.20	*7.79	9.04	48.76	46.00
12.93	12.00	.80	13.73	12.50	2.20	.....	2.20	2.00	.35	.72	§.42	1.14	.82	26.17	22.90
*9.44	10.00	1.41	10.85	10.50	2.56	.....	2.56	2.00	.78	1.00	§.21	1.21	.82	24.26	20.00 20.00 21.00
10.10	9.00	.74	10.84	10.00	3.69	.....	3.69	3.00	.41	.79	§.32	1.11	.82	26.42	22.00
8.45	8.00	.54	8.99	9.00	1.49	.....	1.49	1.00	.....	.....	.....	.76	.82	18.75	19.00
8.71	8.00	1.82	10.53	9.00	10.44	.....	10.44	10.00	1.02	1.41	‡.23	1.64	1.64	41.98	40.00
8.61	8.00	.85	9.46	9.00	2.99	.....	2.99	3.00	1.03	1.40	§.41	1.81	1.64	26.88	27.00
7.94	8.00	1.43	9.37	9.00	10.55	.....	10.55	10.00	2.54	3.12	‡.33	3.45	3.28	49.48	45.00
9.23	8.00	1.28	10.51	9.00	5.10	.....	5.10	5.00	1.27	1.67	‡.19	1.86	1.64	32.14	33.00
8.91	6.00	3.57	12.48	11.00	4.23	.....	4.23	4.00	.99	1.62	§.51	2.13	1.65	32.62	29.50
10.51	8.00	1.36	11.87	9.00	7.35	.....	7.35	7.00	1.71	2.22	‡.27	2.49	2.47	40.90	33.50
8.66	8.00	1.14	9.80	9.00	1.40	.....	1.40	1.00	.68	.94	§.24	1.18	.82	21.09	24.00
8.16	8.00	1.31	9.47	9.00	2.52	.....	2.52	1.75	.75	1.06	§.28	1.34	.82	23.61	23.00
5.20	5.00	1.13	6.33	6.00	1.08	.....	1.08	1.00	.80	1.10	§.28	1.38	.82	18.03	21.00 19.00
*6.97	8.00	2.78	9.75	9.00	3.60	.10	3.70	3.00	2.06	3.08	‡.35	3.43	3.30	35.30	35.00
9.11	8.00	.82	9.93	9.00	2.55	.....	2.55	2.00	2.36	2.91	§.40	3.31	3.30	33.27	32.00
6.88	7.00	1.54	8.42	8.00	2.67	1.00	3.67	2.00	1.38	2.27	‡.43	2.70	2.46	31.36	30.00
7.92	7.00	1.29	9.21	8.00	1.59	.....	1.59	1.00	1.21	1.79	§.42	2.21	1.64	25.44	25.00
8.06	7.00	1.36	9.42	8.00	1.52	.....	1.52	1.00	1.08	1.54	§.47	2.01	1.64	24.48	25.00
8.77	7.00	1.61	10.38	8.00	2.36	.....	2.36	2.00	1.27	1.70	§.41	2.11	1.64	27.46	28.50
6.64	5.00	1.26	7.90	6.00	1.98	.....	1.98	1.75	2.30	3.05	‡.47	*3.52	4.12	31.03	34.00

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.
*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	TUSCARORA FERTILIZER CO., BALTIMORE, MD.		
3054	Ammoniated Phosphate,	H. D. Sitler, Trexlertown,	5.96
3055	Tuscarora's 1-9-3,	H. D. Sitler, Trexlertown,	5.76
3016	†Standard,	A. M. Frederick, Jr., Fairchance, ..	6.11
3057		H. D. Sitler, Trexlertown,	
3056	Tuscarora's 3-8-3,	H. D. Sitler, Trexlertown,	6.83
3017	†Tuscarora's 2-9-3,	A. M. Frederick, Jr., Fairchance, ..	7.56
3053		H. D. Sitler, Trexlertown,	
	FOR THE J. E. TYGERT CO., PHILA., BY AM. AG. CHEM. CO., NEW YORK.		
2353	Golden Harvest Phosphate,	Lovine Lerch, Bethlehem, R. No. 3,	9.14
3115	Premium Manure,	R. F. Brown, Easton, R. No. 4,	8.21
2723	†Popular Phosphate,	David Green, Kunkletown,	7.78
3100		S. R. Kline, Benton, R. D. No. 1, ..	
2724		David Green, Kunkletown,	
2180	†Quaker Special,	Hugh L. Carroll, Doylestown,	7.70
3099		S. R. Kline, Benton, R. D. No. 1, ..	
2352	†Special Potato and Tomato Guano,	Lovine Lerch, Bethlehem,	8.03
3096		S. R. Kline, Benton, R. D. No. 1, ..	
3097	†Standard Fertilizer,	S. R. Kline, Benton, R. D. No. 1, ..	8.63
3108		J. Travers, East Stroudsburg,	
2354		Lovine Lerch, Bethlehem, R. No. 3,	
2181	†Revised Vegetable and Corn Fertilizer,	Hugh L. Carroll, Doylestown,	9.02
3074		Harry Sponeward, Berwick, R. D.,	
	VIRGINIA CAROLINA CHEMICAL CO., BALTIMORE. FOR RESALE BY RASIN MONUMENTAL CO.		
2394	V. C. C. Co's Standard Corn and Grain Grower.	McCalmont & Co., Bellefonte,	8.47
	W. E. WHANN CO., PHILADELPHIA, PA.		
3357	Whann's Chester Valley Special Available Ammoniated Super Phosphate.	A. L. Miller, York, R. No. 1,	7.76
3300	Whann's Chester Valley Special Fish and Potash Fertilizer.	N. T. Sassaman, Ottsville,	8.72
3159	Whann's Chester Valley Special No. 2 Ammoniated Super Phosphate.	Frank Rees, Phoenixville, R. No. 3,	8.22
3302	Whann's Chester Valley Revised Special Ammoniated Super Phosphate.	N. T. Sassaman, Ottsville,	12.17
	WOOLDRIDGE FERTILIZER CO., BALTIMORE, MD.		
3253	Tiger Phosphate,	Grant Johnson, Millville,	7.82
	THE ROBT. A. WOOLDRIDGE CO., BALTIMORE, MD.		
2994	Wooldridge Special Triumph Brand Phosphate.	Bennage & Dershom, White Deer, ..	9.89
	YORK CHEMICAL WORKS, YORK, PA.		
2223		A. F. Lippy, Littlestown,	
2021	†Golden Sheaf,	Felix Lesher, Ashland,	5.40
2383		Weaver & Callahan, Montoursville,	
2237		Strazer Bros., York,	
2184	†Dempwolf's Harvest Queen,	Edw. F. Bracken, Paoli,	4.21
2295		W. A. Cooper, Athens,	
2277	†Dempwolf's Plow Brand,	W. F. Guagey, Berlin,	4.33
3272		Preston Bros., Canton,	
2192		Thos. Haines & Co., Malvern,	
2020	†Dempwolf's Potato Manure,	Felix Lesher, Ashland,	4.73
2228		W. J. Sheffer, Hanover, R. No. 1,	
2367		A. T. Baird, Lock Haven,	
2185	†Dempwolf's Potato Special,	Edw. F. Bracken, Paoli,	5.91
2496		Geo. Edleman, Seigfrieds, R. No. 3,	
2226		M. J. Sheffer, Hanover,	
2190	†Dempwolf's Prosperity,	Thos. Haines Co., Malvern,	3.49
2283		W. F. Guagey, Berlin,	

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Lbs.					Potash in 100 Lbs.				Nitrogen in 100 Lbs.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Water soluble.	Available.	Inactive—Insoluble.	Found.	Guaranteed.		
7.55	7.00	.56	8.11	7.50	1.30	.....	1.30	1.00	.44	.63	§.26	.89	.82	18.21	18.50
9.43	9.00	.89	10.32	9.50	.09	3.25	3.34	3.00	.50	.70	§.26	.96	.82	25.24	22.00
8.15	8.00	1.02	9.17	8.50	1.86	.....	1.86	2.00	.82	1.24	§.53	1.77	1.65	23.97	24.00
															24.00
8.61	8.00	.99	9.60	8.50	2.00	1.53	3.53	3.00	1.09	1.50	§.43	*1.93	2.47	29.13	27.00
9.24	9.00	.93	10.17	9.50	3.05	.....	3.05	3.00	.82	1.27	§.46	1.73	1.65	27.37	26.00
															28.00
8.63	8.00	.17	*8.80	9.00	2.00	.....	2.00	2.00	.34	....	.....	.54	.41	16.74	19.00
9.36	8.00	1.31	10.67	9.00	3.17	.....	3.17	3.00	1.03	1.92	‡.59	2.51	2.47	31.27	27.00
7.76	7.00	1.01	8.77	8.00	1.26	.....	1.26	1.00	.62	.77	§.17	.94	.82	18.74	18.00
															18.25
															21.00
8.72	8.00	1.22	9.94	9.00	3.33	.....	3.33	3.00	.69	.84	§.17	1.01	.82	24.24	.....
															22.00
8.23	8.00	2.12	10.35	9.00	3.25	.....	3.25	3.00	1.28	1.67	§.36	2.03	2.06	28.82	26.00
															26.50
8.20	8.00	2.13	10.33	9.00	2.10	.....	2.10	2.00	.97	1.28	§.25	1.53	1.65	24.16	23.80
															.....
															25.00
8.38	8.00	1.13	9.51	9.00	3.09	.....	3.09	3.00	1.12	1.45	§.33	1.78	1.65	27.00	.....
															24.00
9.38	8.00	1.25	10.63	9.00	2.32	.....	2.32	2.00	.60	.72	§.10	.82	.41	21.80	21.00
7.46	7.00	1.08	8.54	8.00	3.50	.....	3.50	3.00	.73	.93	§.20	1.13	1.03	24.02	21.00
*7.70	8.00	1.14	8.84	9.00	3.05	.....	3.05	3.00	1.14	1.49	‡.20	1.69	1.65	25.87	27.00
7.87	7.00	.96	8.83	8.00	3.20	.....	3.20	3.00	.91	1.12	§.21	1.33	1.23	24.66	24.00
8.41	8.00	.93	9.34	9.00	2.15	....	2.15	2.00	.74	.83	¶.15	.98	.82	21.37	21.00
10.03	9.00	.41	10.44	9.50	2.08	.....	2.08	2.00	.84	.97	§.18	1.15	1.03	23.17	20.00
8.03	8.00	1.24	9.27	9.00	3.21	.....	3.21	3.00	1.24	1.36	§.17	1.53	1.23	25.82	23.25
8.62	8.00	.83	9.45	8.50	1.82	.....	1.82	2.00	.20	.27	¶.23	.50	.28	18.50	18.00
															16.00
															20.00
8.43	8.00	.70	9.13	8.50	2.08	.....	2.08	2.00	.38	.59	§.31	.90	.82	20.73	18.50
															22.00
															21.05
8.43	8.00	.77	9.20	8.50	2.04	.....	2.04	2.00	1.23	1.38	§.23	1.61	1.65	23.85	22.00
															22.50
															24.00
7.81	7.00	.60	8.41	7.50	2.71	.....	*2.71	3.00	.86	1.03	§.22	1.25	1.23	23.92	24.00
															23.00
															27.75
8.95	8.00	.67	9.62	8.50	2.67	.42	3.09	3.00	2.05	2.23	¶.28	2.51	2.47	30.61	30.00
															25.75
															21.00
8.38	8.00	1.63	10.01	8.50	.04	3.02	3.06	3.00	.46	.59	¶.30	.89	.82	23.76	23.00
															21.00

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.
*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	YORK CHEMICAL WORKS, YORK, PA.—Continued.		
2368	Dempwolf's R. B. Special, ...	A. T. Baird, Lock Haven, ...	7.85
2278	†Dempwolf's 2-8-3, ...	W. F. Guagey, Berlin, ...	3.36
2191		Thos. Haines Co., Malvern, ...	
2783		Mt. Holly Seed and Grain Co., Mt. Holly.	
	HENRY S. ZOOK, ELVERSON, PA.		
2664	No. 5, Pride of Chester, Corn, Oats and Wheat Phosphate.	J. P. Stoltzfus, Elverson, ...	8.46

†Composite sample.

LIZERS—Continued

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Nitrogen in 100 Pounds.					Computed commercial value of 2,000 lbs. at Dept. rating.	Selling price of 2,000 lbs. at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Water soluble.	Available.	Inactive insoluble.	Found.	Guaranteed.		
10.89	10.00	1.05	11.94	10.50	1.20	2.33	3.53	3.00	1.23	1.43	¶.32	1.75	1.65	30.51	30.00
8.75	8.00	.57	9.32	8.50	2.89	.....	2.89	3.00	1.23	1.35	¶.26	1.61	1.65	25.75	23.00 26.00 23.50
10.84	10.00	.74	11.58	11.00	2.00	.....	2.00	2.00	.28	.33	¶.19	.52	.41	18.10	20.00

‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less: §=two-fifths to three-fifths; ¶=three-fifths or more.
*Constituents falls below guaranty.

ROCK AND POTASH

Furnishing Phosphoric

Sample number.	Manufacturer and Brand.	From Whom Sample Was Ttaken.	Moisture in 100 pounds.
	AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK.		
2869	†Special Gem Alkaline Phosphate,	R. L. Homm, Spring Grove,	6.88
3404		Mrs. V. O Martin, Loysville,	
2818	†Bradleys Alkaline Phosphate and Potash,	Smith & McKelvey, Blairsville,	7.19
2308		Athens Milling Co., Athens,	
3006		F. T. Greenawalt, West Newton,	
2055	†Crocker's Dissolved Phosphate and Potash	T. R. Bolton, Cochranton,	8.24
2023		Jos. Herb, Pitman, R. D.,	
2829		S. T. & I. W. Gibson, Indiana,	
2691	Crocker's Special Paragon Phosphate,	Union City Coal and Supply Co., Union City.	10.69
3050	Lazaretto Dissolved Phosphate and Potash,	Grove & Uffelman, Parke,	9.08
2086	Michigan Carbon Works Red Line Phosphate with Potash.	Davis & Hyde, Spartanshurg,	7.37
2414	†Milsom's Crown Phosphate,	J. W. Eberts, Clearfield,	6.85
3330		Sam'l F. McQuiston, Meadville,	
2693	†Moro Phillips Alkaline Phosphate,	A. M. F. Stiteler, Uwchland,	9.09
2772		Nickles & Stewart, Shippensburg,	
2284	Northwestern Special Horse Shoe Brand,	Jeff Altfather, Berlin,	8.06
2626	Reese's Special Crown Phosphate and Potash.	D. F. Walker, Rockwood,	6.71
2642	†Susquehanna Special High Grade Phosphate and Potash,	Woy & Saylor, Somerset,	8.46
3400		G. E. Beaver, Millerstown,	
2683	Tygert Allen's Star Soluble Phosphate and Potash.	Harvey Detwiler, Chester Springs,	10.68
2246	†Wheeler's Special All Crop Grower,	N. H. Blough, Davidsville,	10.42
2293		Geo. Decker, Athens,	
2447	†Williams & Clark's Triump Phosphate,	Isaac M. Sheetz, Sunbury R. No. 2	8.41
3118		R. Milheim, Nazareth, R. No. 2,	
2996	†Zell's Electric Phosphate,	B. F. Hummel, Shamokin Dam,	7.26
2448		Tressler Schlegel & Co., Red Cross,	
3358		A. A. Ehrhart, Dallastown, R. No. 1	
	AMERICAN FERTILIZING CO., BALTIMORE MD.		
2388	†American Alkaline Super Phosphate,	John H. Niedigh, State College,	8.25
3318		B. R. Watson, Oxford,	
2640	†Dissolved Phosphate and Potash,	J. G. Emert, Somerset,	8.56
3367		J. D. Goldsmith, Williamson,	
	ARMOUR FERTILIZER CO., BALTIMORE, MD.		
2557	†Phosphate and Potash No. 1,	Jacob Bowser, St. Clairsville,	7.82
2474		Fritz Bros., Garrett,	
2565		Levi Stuckey, New Enterprise,	
	ATLANTIC FERTILIZER CO., BALTIMORE, MD.		
3279	Atlantic Twelve and One,	Wysox Coal & Hay Co., Wysox,	7.10
	ATLANTIC FERTILIZER WORKS, BALTIMORE, MD.		
2289	Atlantic 12-2 Brand,	Lott Shoemaker, Nichols, N. Y.,	10.32
	BALTIMORE PULVERIZING CO., BALTIMORE, MD.		
2330	Special Spring and Fall Mixture,	J. C. Royer, Myerstown, R. No. 4,	7.55
	BAUGH & SONS CO., PHILADELPHIA, PA.		
2406	Baugh's High Grade Potash Mixture,	R. D. Forman, Centre Hall,	7.88
2224	†Baugh's Soluble Alkaline Super Phosphate.	Humbert & Krug, Littlestown,	7.43
2012		W. W. Haas, Pitman, R. D.,	
2350		J. F. Stier, Johnsonville,	
	BERGER BROS., EASTON, PA.		
2735	Peerless Phosphate,	John Kuntzman, Easton,	8.41

†Composite sample.

FERTILIZERS.

Acid and Potash.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.			
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.		
10.73	10.00	1.17	11.90	11.00	1.38	.....	1.38	1.00	14.62	14.00
10.55	10.00	1.08	11.63	11.00	2.23	.....	2.23	2.00	16.22	18.00 18.00 17.00
10.27	10.00	.68	10.95	11.00	1.85	.....	1.85	2.00	15.12	17.25 15.00 18.00
12.20	12.00	.77	12.97	13.00	2.17	.....	2.17	2.00	17.02	17.50
10.34	10.00	.94	11.28	11.00	2.66	.....	2.66	2.00	16.87	15.00
10.00	10.00	.72	*10.72	11.00	2.08	.....	2.08	2.00	15.45	17.00
10.69	10.00	.87	11.56	11.00	1.90	.....	1.90	2.00	15.79	14.00 17.10
10.41	10.00	.85	11.26	11.00	2.06	.....	2.06	2.00	15.66	15.00 15 00
12.15	12.00	.56	*12.71	13.00	2.48	.....	2.48	2.00	17.55	22.50
12.75	12.00	1.11	13.86	13.00	2.53	.....	2.53	2.00	18.28	16.40
12.42	12.00	.75	13.17	13.00	1.91	.....	1.91	2.00	16.64	17.75 15.55
10.89	10.00	.48	11.37	11.00	2.19	.....	2.19	2.00	16.20	17.50
14.66	14.00	.50	15.16	15.00	2.09	.....	2.09	2.00	18.48	19.00 20.00
9.96	10.00	1.19	11.15	11.00	2.13	.....	2.13	2.00	15.64	15.00 .....
10.34	10.00	.87	11.21	11.00	2.10	.....	2.10	2.00	15.72	..... 16.50 16.00
8.25	8.00	1.42	9.67	9.00	2.00	.....	2.00	2.00	14.26	15.25 16.00
10.17	10.00	1.50	11.67	11.00	2.02	.....	2.02	2.00	15.54	16.50 15.50
9.86	10.00	.70	10.56	10.50	2.02	.....	2.02	2.00	15.15	16.50 18.00 15.00
*11.32	12.00	1.79	13.11	.....	1.20	.....	1.20	1.00	14.74	16.00
*11.45	12.00	.89	12.34	.....	2.25	.....	2.25	2.00	16.77	17.50
10.42	8.00	.94	11.36	.....	2.16	.....	2.16	1.00	15.88	14.00
13.10	13.00	.82	13.92	.....	2.19	.....	2.19	2.00	17.73	20.00
11.00	10.00	.83	11.83	.....	2.48	.....	2.48	2.00	16.94	17.00 14.50 16.00
10.98	10.00	1.06	12.04	11.00	2.48	.....	2.48	2.00	17.01	.....

*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	BOWKER FERTILIZER CO., BOSTON.		
2059	†Bowker's Special Golden Harvest Fertilizer.	Jas. E. Wheeling, Cochranton, R. D.	10.28
3247		Harvey W. Hess, Benton, R. No. 5,	
3519	Bowker's S. and P. Fertilizer,	H. L. Stultz & Bro., Altoona,	8.03
	S. B. BRODBECK, BRODBECK, PA.		
3029	Brodbeck's Alkaline,	S. B. Brodbeck, Brodbeck,	7.33
	CENTRAL CHEMICAL CO., THOMAS FERTILIZER WORKS, HAGERSTOWN, MD.		
3362	C. C. C. Commonwealth,	L. H. Leiter & Bro., Greencastle R. No. 2.	5.71
2385	C. C. C. Potash Special,	Jno. W. Bathgate, State College,	11.00
	CONSUMER'S CHEMICAL CORPORATION, NEW YORK.		
2300	†Consumer's High Grade Phosphate and Potash.	Martin Allyn, Nichols, N. Y., R. No. 3.	9.81
3248		T. C. Knouse, Benton, R. No. 3,	
3072		Henry Rittenhouse, Berwick R. No. 2.	
2572	†Consumer's Pure Sure Phosphate and Potash.	H. F. Gump & Son, Everett,	6.34
3078		Zehner Bros., Bloomsburg,	
2422		Chas. Yoeckle, Patton,	
2299	†Consumer's Special Phosphate and Potash.	Martin Allyn, Nichols, N. Y., R. No. 3.	9.44
2837		Morris Speiker, Somerset R. No. 1,	
	JOSIAH COPE & CO., BALTIMORE, MD.		
3487	Soluble Phosphate and Potash,	J. C. Henderson, Petersburg, R. D.,	8.14
	EUREKA CEHMICAL CO., BALTIMORE, MD.		
2958	†Eureka Alkaline,	D. B. Dimm, Thompsontown,	8.68
3060		Jonas P. Acker, Breiningsville,	
3033	Eureka Alkaline No. 2,	J. P. Schuchart, New Freedom,	8.65
	FARMER'S FERTILIZER WORKS, ELIZABETHTOWN, PA.		
3395	†Farmer's Economy,	B. F. Horting, Newport,	8.26
3396		I. B. Secrist, Millerstown,	
2759	Sure Crop,	Ben Garman, Elizabethtown,	8.24
	GRIFFITH & BOYD CO., BALTIMORE MD.		
2995	Alkaline Mixture,	Adam Krugg, Allenwood,	7.94
2702	Little Gem,	E. A. Slagle, Paxinos,	7.72
2871	Soluble 12 and 2,	J. R. Scarborough & Son, Delta,	9.11
3414	Special Grain Grower,	C. F. Gelbach, Duncannon,	9.56
	W. S. HASTINGS & SON, ATGLEN, PA.		
2668	Rock and Potash,	Wm. S. Hastings & Son, Atglen,	8.26
	S. M. HESS & BRO., PHILADELDPHIA, PA.		
2843	†Climax Alkaline Fertilizer,	Edw. F. Miller, Somerset,	9.62
2402		G. H. Emerick, Centre Hall,	
3204		H. N. Carpenter, Wellsboro,	
2552	†Soluble Phosphate and Potash,	A. L. Veit, McKean,	7.48
2241		Moses Weaver, Holsopple,	
3176		James P. Myers, Longsdorf,	
	P. HOFFMAN & BRO., RAUBSVILLE, PA.		
3304	Hoffmans Oats,	P. Hoffman & Bro., Raubsville,	3.00
	HUBBARD FERTILIZER CO., BALTIMORE, MD.		
2232	Alkaline 10-1,	J. Emery Maul, Iron Ore,	10.69
2375	†Hubbard's Corn and Wheat,	Geo. Pantol, White Pine,	10.60
2230		J. Emery Maul, Iron Ore,	
3226		D. H. Fair, New Buena Vista,	
2229	†Hubbard's Wheat and Rye, 12 and 2,	J. Emery Maul, Iron Ore,	10.31
2978		Union H'd'w. Co., Mifflintown,	

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acide in 100 Pounds.					Potash in 100 Pounds.					
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
Found.	Guaranteed			Guaranteed.			Found.	Guaranteed.		
12.46	12.00	1.24	13.70	13.00	2.76	.....	2.76	2.00	18.54	16.75 18.00
10.18	10.00	1.05	11.23	11.00	1.42	.....	1.42	1.00	14.24	16.00
8.80	8.00	1.25	10.05	9.00	2.25	.....	2.25	2.00	15.10	14.00
10.83	11.00	.59	11.42	.....	.86	.....	.86	1.00	13.41	15.00
13.86	14.00	.44	14.30	.....	2.04	.....	2.04	2.00	17.84	.....
17.54	16.00	.90	18.44	17.00	2.59	.....	2.59	2.00	21.50	20.00 22.75 .....
9.59	9.00	1.18	10.77	10.00	1.72	.....	*1.72	2.00	14.48	18.00 15.00 18.75
12.49	12.00	1.31	13.80	13.00	2.28	.....	2.28	2.00	17.66	17.00 15.00
10.71	10.00	.64	11.35	11.00	2.58	.....	2.58	2.00	16.93	.....
12.21	12.00	1.02	13.23	12.50	1.23	.....	1.23	1.00	15.26	..... 17.00
12.02	11.00	.89	12.91	11.50	1.90	.....	1.90	2.00	16.41	16.50
11.22	10.00	1.40	12.62	.....	2.27	.....	2.27	2.00	16.72	14.50 15.00
10.17	10.00	1.30	11.47	.....	3.41	.....	3.41	3.00	18.34	18.00
9.97	10.00	.41	11.24	.....	1.13	.....	1.13	1.00	13.51	13.00
9.23	8.00	1.74	10.97	9.00	1.40	.....	1.40	1.00	13.75	14.00
12.57	12.00	1.28	13.85	13.00	2.46	.....	2.46	2.00	18.00	17.00
11.04	10.00	2.07	13.11	11.00	1.74	.....	1.74	2.00	15.76	16.00
10.83	10.00	.41	11.24	.....	2.13	.....	2.13	2.00	16.05	14.00
14.35	14.00	.83	15.18	15.00	2.22	.....	2.22	2.00	18.55	18.50 18.00 18.50
9.97	10.00	.89	10.86	11.00	3.24	.....	3.24	2.00	17.82	17.00 16.00 16.00
8.82	8.00	1.62	10.44	10.00	2.11	.....	2.11	2.00	14.91	16.00
12.02	10.00	2.17	14.19	11.00	1.09	.....	1.09	1.00	15.12	14.50
12.11	12.00	2.61	14.72	13.00	1.15	.....	1.15	1.00	15.37	..... 16.00 .....
*11.64	12.00	2.82	14.46	13.00	2.08	.....	2.08	2.00	17.01	17.50 18.00

*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO FERT. WKS., BUFFALO.		
2096	†Buffalo Twelve-Two,	Penn Distributing Co., Union City,	8.25
2272		Ed. Frazier, Shanksville,	
	JARECKI CHEMICAL CO., SANDUSKY, O.		
2542	Super Phosphate and Potash,	E. J. Cass, Harbor Creek,	13.97
	KEYSTONE GRANGE EXCHANGE, MANSFIELD, PA.		
3479	Granger's Buckwheat Special,	L. A. Pidcoc, Linden, R. No. 3,	6.82
	THE LANCASTER CHEMICAL CO., LANCASTER, PA.		
3552	No. 10 Economist,	New Providence Coal Co., New Providence.	6.14
	LISTER'S AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.		
2236		J. G. Ernst, York,	
2069	†Lister's Revised Grain and Grass Fertilizer.	F. P. Allen & Co., Titusville,	6.91
2765		Isaac Plasterer, Lebanon, R. D.,	
2466	†Lister's Special Alkaline Fertilizer,	S. J. Ringler, Elk Lick,	9.01
2564		Jacob Bowser, St. Clairsville,	
	PATAPSCO GUANO CO., BALTIMORE, MD.		
2578		J. N. Hersh, New Oxford,	
2342	†Patapsco Soluble Phosphate and Potash,	Chas. Shimmel, Ackermanville,	9.66
3237		Briggs Bros., Mt. Union,	
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.		
2444		R. L. Reiger, Herndon,	
2335	†Piedmont Farmers Potash Mixture,	H. H. Loose, Menges Mills,	7.15
3209		R. S. Brown, Morris,	
	RASIN MONUMENTAL CO., BALTIMORE, MD.		
2913	Rasins Big Sixteen Alkaline Compound,	Siegfried & Schwoyer, Kempton,	10.51
2677		S. C. Walker & Co., Chadds Ford Junction.	
2111	†Rasins Corn Buckwheat and Tomato Special.	Geo. E. Buck, Krumsville,	6.14
2700		E. A. Slagle, Paxinos,	
3003	†Rasins Phosphate and Potash Fertilizer,	H. S. Kramer, Kramer,	6.91
3091		H. D. Miller, Mifflinville,	
	READING CHEMICAL CO., READING, PA.		
3164	High Grade Phosphate and Potash,	John W. Root, Kimberton,	9.69
	ROBERT A. REICHARD, ALLENTOWN, PA.		
2617	Ideal Phosphate,	W. J. Gehringer, Seagersville,	3.85
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.		
3027	Royster's Alba Compound,	C. C. Davis, Greensburg,	6.58
2319		S. A. Phillippy, Schaefferstown, R. No. 1.	
2063	†Royster's Cloverdale Grain and Grass Grower.	W. C. Work & Son, Cochranton,	8.07
2362		J. N. Getz Co., Lock Haven,	
2435		W. S. Opp, Opp,	
2427	†Royster's Harmony Compounds,	Wm. Biller, Patton,	9.92
2490		John Kunkel, Bath,	
	THE SCOTT FERTILIZER CO., ELKTON, MD.		
3123	Scott's Soluble Phosphate and Potash 12-2,	S. Applegate, Bethlehem,	9.43
	SMITH'S AGRICULTURAL CHEMICAL CO., COLUMBUS, O.		
3326	Smith's Soluble Phosphate and Potash,	Girard Coal & Supply Co., Girard,	7.38

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.			
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.		
12.55	12.00	.79	13.34	13.00	1.96	.....	1.96	2.00	16.86	21.00 18.75
*11.49	12.00	.75	*12.24	13.00	2.34	.....	2.34	2.00	16.98	18.00
10.40	10.00	1.39	11.79	11.00	2.16	.....	2.16	2.00	15.99	14.00
*9.50	10.00	.38	*9.88	11.00	2.23	.....	2.23	2.00	15.37	15.50
9.85	10.00	1.25	11.10	11.00	2.36	.....	2.36	2.00	16.00	16.00 18.00 17.00
12.11	12.00	.73	12.84	13.00	2.39	.....	2.39	2.00	17.47	19.00 16.70
10.28	10.00	.66	10.94	11.00	2.60	.....	2.60	2.00	16.66	.... 14.00
10.48	10.00	.33	10.81	.....	1.90	.....	1.90	2.00	15.28	15.00 15.00 17.00
17.07	16.00	1.38	18.45	17.00	2.36	.....	2.36	2.00	20.79	20.00
7.40	7.00	1.01	8.41	8.00	2.43	.....	2.43	2.00	14.53	18.50 13.00
10.33	10.00	1.40	11.73	11.00	2.10	.....	2.10	2.00	15.85	15.00 15.75 17.50
11.96	12.00	.49	12.45	.....	1.97	.....	1.97	2.00	16.39	20.00
10.38	10.00	.62	11.00	11.00	1.98	.....	1.98	2.00	15.49	16.00
12.22	11.00	.87	13.09	11.50	1.82	.....	1.82	1.50	16.36	18.00
11.47	10.00	.86	12.33	10.50	2.28	.....	2.28	2.00	16.89	15.50 17.25 16.50
12.55	12.00	1.36	13.91	12.50	2.05	.....	2.05	2.00	17.19	16.75 18.50 .....
13.59	12.00	.91	14.50	.....	2.83	.....	2.83	2.00	19.41	.....
10.90	10.00	.45	11.35	.....	2.70	.....	2.70	2.00	17.22	17 00

*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	SWIFT & CO., BALTIMORE, MD.		
2365	Swift's Pure Special Phosphate and Potash	Albert C. Myers, Lock Haven, ...	5.77
2697	†Swift's Pure Twelve and One Brand, ..	Reed & Erdman, Paxinos, ...	4.96
3435		Kemmer & Co., Lehighton, ...	
2095	†Swift's Pure Twelve and Two Brand, ..	Penn Distributing Co., Union City,	7.13
2582		J. R. Weaver & Bro., New Oxford,	
	I. P. THOMAS & SONS CO., PHILADELPHIA, PA.		
2581		J. H. Duttera, New Oxford, ...	
2315	†Special Alkaline Manure, ...	Ed. Shuey, Lickdale, R. No. 1, ..	11.22
2758		E. S. Risser, Palmyra, R. No. 2, ..	
	FOR J. E. TYGERT CO., PHILA., BY AM. AG. CHEM. CO., NEW YORK.		
3245	Tygert's Clover Leaf Phosphate, ...	S. R. Kline, Benton, R. No. 1, ...	11.09
2722	†Soluble Phosphate and Potash, ...	Clinton Kunkel, Kresskyville, ...	5.15
3089		Geo. S. Miller, Mifflinville, ...	
	VIRGINIA CAROLINA CHEMICAL CO., FOR RESALE BY THE RASIN MONUMENTAL CO., BALTIMORE, MD.		
2395	V. C. C. Co's Giant Alkaline Grain Grower,	McCalmot & Co., Bellefonte, ...	9.96
2586	V. C. C. Co.'s Peerless Phosphate and Potash.	J. R. Weaver & Bro., New Oxford,	9.51
2585	V. C. C. Co's 16 and 2 Alkaline Crop Grower.	J. R. Weaver & Bro., New Oxford,	7.41
	W. E. WHANN CO., PHILA., BY AM. AG. CHEM. CO.		
3464	Whann's Alkaline Phosphate, ...	S. P. Schnaln, Valley View, ...	8.62
	ROBT. A. WOOLRIDGE CO., BALTIMORE, MD.		
2555	†Woolridge's German Potash Mixture, ..	V. A. Stufft, Imler, ...	9.05
3259		H. V. Smith, Turbotville, ...	
2554	Woolridge's Special No. 1 Phosphate and Potash.	V. A. Stufft, Imler, ...	10.71
2471	Woolridge's Special Liberty Belle Potash Mixture.	Grant Sechler, Salisbury, ...	7.21
	WOOLRIDGE FERTILIZER CO., BALTIMORE, MD.		
2267	Virginia Belle, ...	Hill & Walker, Shanksville, ...	8.98
	YORK CHEMICAL WORKS, YORK, PA.		
2227	Dempwolf's Black Cross, ...	M. J. Sheffer, Hanover, ...	8.54
2296		W. A. Cooper, Athens, ...	
2221	†Dempwolf's Phosphate and Potash, ...	A. P. Lippy, Littlestown, ...	7.71
2393		Elmer Musser, State College, ...	
2282	Dempwolf's 12-2, ...	W. Guagey, Berlin, ...	7.89

†Composite sample.

FERTILIZER—Continued.

Phosphoric Acid in 100 Pounds.					Potash in 100 Pounds.					
Available.		Insoluble.	Total.		Present as muriate.	Present as sulphate.	Total.		Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
Found.	Guaranteed.		Found.	Guaranteed.			Found.	Guaranteed.		
10.16	10.00	1.35	11.51	.....	2.10	.....	2.10	2.00	15.70	17.00
12.71	12.00	1.53	14.24	.....	.94	.....	.94	1.00	15.10	{ 17.00 { 12.50
*11.70	12.00	1.18	12.88	.....	2.02	.....	2.02	2.00	16.50	{ 21.00 { 17.00
12.04	12.00	.86	12.90	12.50	2.36	.....	2.36	2.00	17.36	{ 17.00 { 17.50 { 17.00
*12.43	14.00	1.39	*13.82	15.00	3.02	.....	3.02	2.00	19.08	18.50
10.47	10.00	1.68	12.15	11.00	2.35	.....	2.35	2.00	16.51	{ ..... { 17.50
15.07	14.00	1.48	16.55	15.00	2.57	.....	2.57	2.00	19.90	21.00
10.14	8.00	1.16	11.30	9.00	2.29	.....	2.29	2.00	16.06	14.00
17.42	16.00	1.28	18.70	17.00	2.64	.....	2.64	2.00	21.61	19.00
*9.78	10.00	.63	*10.41	11.00	2.46	.....	2.46	2.00	16.02	17.00
10.25	10.00	.83	11.08	11.00	2.00	.....	2.00	2.00	15.45	{ 18.50 { 16.00
10.54	10.00	.87	11.41	11.00	1.50	.....	1.50	1.00	14.62	15.50
12.67	12.00	.42	13.09	13.00	2.38	.....	2.38	2.00	17.78	18.75
*11.79	12.00	.94	12.73	12.50	2.61	.....	2.61	2.00	17.72	17.50
10.14	10.00	.89	11.03	10.50	1.88	.....	1.88	2.00	15.19	16.00
10.67	10.00	.51	11.18	10.50	1.96	.....	1.96	2.00	15.57	{ 16.45 { 16.00 { 15.50
13.05	12.00	.48	13.53	12.50	2.13	.....	2.13	2.00	17.53	16.65

*Constituents falls below guaranty.

DISSOLVED BONE

Furnishing Phosphoric

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	BAUGH & SONS CO., PHILADELPHIA, PA.	
2404	Baugh's, The Old Stand-By (Dissolved Animal Bone).	R. D. Foreman, Centre Hall, ...
2141	Baugh's Pure Dissolved Animal Bones, ..	Jas. G. Kauffman, Dauberville, ...
	CENTRAL CHEMICAL CO., THOMAS FERTILIZER WORKS, HAGERSTOWN, MD.	
2842	C. C. C. Dissolved Bone, ...	Swank Bros., Somerset, ...
	EUREKA CHEMICAL CO., BALTIMORE, MD.	
3025	Eureka Dissolved Bone, ...	C. C. Davis, Greensburg, ...
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
2873	†Fish and Bone Mixture, ...	J. R. Scarborough & Son, Delta, ...
2258		F. A. Meyers, Hooversville, ...
2951		Willis C. Herr, Strausburg, ...
2948	Griffith & Boyd Co's. Pure Dissolved Animal Bone.	Willis C. Herr, Strausburg, ...
	LISTER'S AGRICULTURAL CHEMICAL WORKS, NEWARK, N. J.	
3289	Lister's Celebrated Ground Bone and Tankage, Acidulated.	Dekin & Ash, Susquehanna, ...
	MARTIN FERTILIZER CO., PHILADELPHIA, PA.	
2443	Martin's Dissolved Animal Matter, ...	G. W. Wynn, Sunbury, R. F. D., ...
	F. W. TUNNELL & CO., INC., PHILADELPHIA, PA.	
3139	Raw and Acidulated Animal Compound, ..	John C. Rhodes & Co., Newton Square, ...

†Composite sample.
*Constituent falls below guaranty.

FERTILIZERS.

Acid and Nitrogen.

Moisture in 100 pounds.	Phosphoric Acid in 100 Pounds.					Nitrogen in 100 Pounds.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
	Available.		Insoluble.	Total		Water soluble.	Available.	Inactive—Insoluble.	Total.			
	Found.	Guaranteed.		Found.	Guaranteed.				Found.	Guaranteed.		
6.89	13.19	12.00	1.98	15.17	.....	1.04	1.39	a.12	1.51	1.65	22.88	$25.00
4.73	14.08	13.00	1.41	15.49	.....	1.19	1.97	a.42	2.39	2.06	27.51	25.00
7.39	13.13	13.00	1.17	14.30	.....	1.63	2.01	a.20	2.21	2.05	25.62	24.60
4.57	12.47	11.00	1.49	13.96	11.50	1.56	1.73	a.11	1.84	1.65	23.56	28.00
6.77	9.77	9.00	.73	10.50	10.00	.51	.85	b.39	*1.24	1.50	17.43	20.00 22.00 23.00
6.91	10.89	10.00	5.19	16.08	11.00	1.52	1.87	b.27	2.14	2.00	25.32	28.00
4.79	9.01	.....	3.30	12.31	12.00	1.81	2.84	a.13	2.97	2.67	26.34	29.00
6.84	*11.77	12.00	1.44	13.21	.....	1.33	1.68	a.23	1.91	1.65	23.13	21.00
4.62	12.09	10.00	6.77	*18.86	20.00	1.10	1.63	a.26	1.89	1.64	26.00	26.00

a, b, c; Letters indicating the proportions of insoluble nitrogen that is inactive: a=2/5 or less; b=2/5 to 3/5; c=3/5 or more.

ACIDULATED

Furnishing

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK.	
3515	Wheeler's Peerless Acid Phosphate,	W. S. Snyder, Rockland, R. F. D. No. 3,
2704	†16% Acid Phosphate,	J. A. Kimbel, Elysburg,
2690		A. M. F. Stiteler, Uwchland,
2786		L. F. Harris, 2115 N. 2nd St., Harrisburg,
	AMERICAN FERTILIZING CO., BALTIMORE, MD.	
2389	High Grade Acid Phosphate,	John H. Neidigh, State College,
	ARMOUR'S FERTILIZER WORKS, BALTIMORE, MD.	
2304	Acid Phosphate,	Orwell Grange, Orwell,
2898	†Star Phosphate,	Louck's Hardware Co., Scottdale,
2287		P. J. Cover & Sons, Meyersdale,
3231		H. E. Huston, Saltillo,
	ATLANTIC FERTILIZER CO., BALTIMORE, MD.	
3419	Atlantic Dissolved Phosphate, 16%,	Cove Lumber Co., Marysville,
	BALTIMORE PULVERIZING CO., BALTIMORE, MD.	
2325	†S. C. Phosphate,	J. C. Royer, Myerstown, R. F. D. No. 4,
3255		J. G. Washburne, Millville,
	BAUGH & SONS CO., PHILADELPHIA, PA.	
2632	†Baugh's 16% Acid Phosphate,	W. P. Hay, Somerset,
2193		Brillinger & Swartz, Emigsville,
2833		Edwards Hardware Co., Ebensburg,
	For S. B. BRODBECK, BRODBECK, PA.	
2884	Brodbeck's Ruth Dissoved Phosphate, 14%,	S. B. Brodbeck, Brodbecks,
	CONSUMERS' CHEMICAL CORPORATION, NEW YORK.	
2424	†Consumers' High Grade Acid Phosphate,	Chas. Yeackle, Patton,
2505		Arthur L. Kniffin, Ulster,
3221	†Consumers' Pure Sure Acid Phosphate,	H. F. Gump & Son, Everett,
3235		C. E. Starr, Three Springs,
	COE MORTIMER CO., NEW YORK.	
2735	†E. Frank Coe's High Grade Souble Phosphate.	C. B. Farr, North East,
2893		Geo. J. New, Blairsville,
2303	E. Frank Coe's 16% Super Phosphate,	C. J. Estabrook, Rummerfield, R. F. D.,
	HENRY COPE & CO., LINCOLN UNIVERSITY, PA.	
2147	Acid Phosphate,	S. K. Chambers & Bro., West Grove,
	FARMERS' FERTILIZER WORKS, ELIZABETHTOWN, PA.	
2763	Acid Phosphate,	Ben Garman, Elizabethtown,
	W. S. FARMER & CO., BALTIMORE, MD.	
2480	Dissolved S. C. Phosphate,	J. E. Sipe, Rockwood,
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
2872	†Griffith & Boyd Co's. High Grade Acid Phosphate.	J. R. Scarborough & Son, Delta,
2944		Willis C. Herr, Strausburg,
	W. S. HASTINGS & SON, ATGLEN, PA.	
2667	Clear Acid Phosphate,	Wm. S. Hastings & Son, Atglen,
	S. M. HESS & BRO., PHILADELPHIA, PA.	
3222	†High Grade Acid Phosphate,	Ira Price, Everett R. F. D.,
3266		Harry Shipman, Hughesville R. F. D.,

†Composite sample.

ROCK PHOSPHATE.

Phosphoric Acid.

Moisture in 100 pounds.	Phosphoric Acid in 100 Pounds.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
	Available.		Insoluble.	Total.			
	Found.	Guaranteed.		Found.	Guaranteed.		
2.69	15.60	14.00	.87	16.47	15.00	13.70	$14.00
5.58	16.68	16.00	1.09	17.77	17.00	14.46	15.00 13.50 .....
9.29	15.53	14.00	1.17	16.70	15.00	13.74	13.50
10.77	16.02	16.00	.08	*16.10	16.50	13.78	12.90
7.33	14.79	14.00	.45	15.24	14.50	13.08	17.00 18.00 13.50
4.52	17.88	16.00	1.30	19.18	.....	15.33	.....
8.56	17.03	16.00	.44	17.47	.....	14.56	14.00 13.00
8.52	17.08	16.00	.83	17.91	.....	14.68	15.00 13.00 15.00
7.62	15.75	14.00	1.07	16.82	15.00	13.84	12.00
7.64	17.77	16.00	1.24	19.01	17.00	15.21	14.00
8.62	15.17	14.00	.89	16.06	15.00	13.41	13.50 13.50 13.00
4.40	14.77	14.00	1.31	16.08	15.00	13.28	14.00
6.43	15.87	16.00	1.66	17.53	17.00	14.10	17.00 12.90
9.19	15.78	14.00	1.31	17.09	.....	13.94	12.00
8.53	15.31	14.00	.33	15.64	.....	13.39	.....
5.55	15.56	14.40	.48	16.04	15.00	13.58	12.50
10.71	14.99	14.00	.34	15.33	15.00	13.18	12.00 14.00
9.10	15.87	14.00	.51	16.38	.....	13.82	12.00
7.92	14.44	14.00	1.91	16.35	15.00	13.20	13.50 13.50

*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	HUBBARD FERTILIZER CO., BALTIMORE, MD.	
2560	†Hubbard's 16% Phosphate,	W. Howard Burket, Alum Bank,
2231		J. Emery Maul, Iron Ore,
3157		John Hicks, Avondale,
	M. P. HUBBARD & CO., BALTIMORE, MD.	
3084	Hubbard's Dissolved Phosphate,	D. C. Shuman, Bloomsburg,
2116	Hubbard's Soluble Phosphate,	L. A. Geiger, Joanna,
	INTERNATIONOL AGRICULTURAL CORPORATION, BUFFALO FERTILIZER WORKS, BUFFALO, N. Y.	
2072	Buffalo Dissolved Phosphate,	H. B. Edwards, Titusville,
3213	Buffalo Sixteen Per Cent.,	Snyder Bros., Liberty,
	JARECKI CHEMICAL CO., SANDUSKY, O.	
2477	†C. O. D. Phosphate,	S. S. Mosholder, Rockwood,
2541		E. J. Cass, Harbor Creek,
	KEYSTONE GRANGE EXCHANGE, MANSFIELD, PA.	
3107	Grangers' 16% Acid Phosphate,	Edgar V. Bensley, Egypt Mills,
	LANCASTER CHEMICAL CO., LANCASTER, PA.	
3551	No. 8 Acid Phosphate,	New Providence Coal Co., New Providence,
	LEBANON FERTILIZER WORKS, LEBANON, PA.	
3252	Levan's Acid Phosphate,	W. W. Parker, Rohrsburg, R. F. D. No. 1,
	NITRATE AGENCIES CO., NEW YORK.	
2027	†High Grade Acid Phosphate, 16%,	W. H. Stout, Pine Grove,
2313		H. H. Hess, Lickdale,
2157	High Grade Acid Phosphate, 14%,	Edw. Brinton & Sons, West Chester,
	NORTHWAY & PECK, EAST ORWELL, O.	
3350	16% Available Phosphoric Acid,	D. H. Rodgers, Pardoe,
	PATAPSCO GUANO CO., BALTIMORE, MD.	
2577	Patapsco Pure Dissolved S. C. Phosphate,	J. N. Hersh, New Oxford,
	PIEDMONT MT. AIRY GUANO CO., BALTIMORE, MD.	
3243	†Piedmont 14% Acid Phosphate,	Jno. G. Simpson, Huntingdon,
3408		J. M. Dunn, New Bloomfield,
	POLLOCK FERTILIZER CO., BALTIMORE, MD.	
3225	The Pollock Fertilizer Co's. High Grade Super Phosphate.	John L. Bartz, Bedford,
	RASIN MONUMENTAL CO., BALTIMORE, MD.	
2336	†Rasin's Sea Wall Special,	Elias S. Brubacher, Richland,
2679		S. C. Walker & Co., Chadds Ford Jct.,
	READING BONE FERTILIZER CO., READING, PA.	
2917	†14% Acid Phosphate,	Wm. Willets, Calcium,
2601		F. A. Scheirer, Slatington,
3019		A. M. Frederick, Jr., Fair Chance,
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.	
2252	†Royster's 14% Acid Phosphate,	Blough & Yoder, Holsopple,
2033		Thos. Kuntzleman, Orwin,
2711		N. C. Creasy, Catawissa,
2492	†Royster's High Grade 16% Acid Phosphate.	John Kunkel, Bath,
2425		Wm. Biller, Patton,
2799		W. J. Grover & Son, Newfield,

†Composite sample.

PHOSPHATE—Continued.

Moisture in 100 pounds.	Phosphoric Acid in 100 Pounds.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
	Available.		Insoluble.	Total			
	Found.	Guaranteed.		Found.	Guaranteed.		
9.36	15.85	16.00	2.55	18.40	17.00	14.28	.....
							13.50
							13.00
9.12	15.91	16.00	2.11	18.02	17.00	14.20	14.60
7.37	15.58	14.00	.42	16.00	15.25	13.59	12.00
7.87	14.66	14.00	.77	15.43	15.00	13.05	16.00
9.89	17.79	16.00	.65	18.44	17.00	15.10	16.00
12.31	13.92	14.00	1.15	15.07	15.00	12.66	15.00
							15.00
6.64	18.21	16.00	.93	19.14	17.00	15.44	**15.00**
9.07	14.30	14.00	.41	14.71	15.00	12.74	**13.50**
7.51	15.16	14.00	.80	15.96	15.00	13.39	13.75
7.33	16.66	16.00	.79	17.45	17.00	14.38	12.00
6.27	16.81	14.00	.61	17.42	15.00	14.43	.....
							13.00
8.51	16.68	16.00	.70	17.38	.....	14.40	12.50
6.32	*13.28	14.00	1.79	15.07	15.00	12.40	15.00
7.85	16.36	14.00	.89	17.25	.....	14.20	14.00
							.....
10.22	17.22	16.00	1.09	18.31	17.00	14.82	15.00
6.21	10.84	10.00	.97	11.81	11.00	10.59	.....
							12.00
5.97	11.23	14.00	1.54	15.77	15.00	12.98	12.00
							12.00
							16.00
6.84	15.30	14.00	1.25	16.55	14.50	13.60	15.00
							15.00
							14.00
9.19	***15.78**	16.00	1.28	**17.06**	16.50	13.93	.....
							14.50
							16.00

*Constituents falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	SWACK'S FERTILIZER WORKS, DUBOIS, PA.	
2420	Swack's Acid Phosphate, ...	Chas. Yeackle, Patton, ...
	SWIFT & CO., CLEVELAND, O.	
2583	†Swift's Pure Garden City Phosphate, ...	J. R. Weaver & Bro., New Oxford, ...
2093		Penn Distributing Co., Union City, ...
3154		Wm. C. Ball, Media, ...
	J. M. TEMPLIN, HONEYBROOK, PA.	
2672	No. 5 High Grade Acid Phosphate, ...	J. M. Templin, Honeybrook, ...
	I. P. THOMAS & SONS CO., PHILADELPHIA, PA.	
2580	†16% Acid Phosphate, ...	J. H. Duttera, New Oxford, ...
3345		Wm. J. Moyer, Greenville, ...
	TUSCARORA FERTILIZER CO., BALTIMORE, MD.	
3497	Acid Phosphate, ...	L. Longanecker, Greensburg, ...
	J. E. TYGERT CO., PHILA., PA., By AM.-AG. CHEM. CO.	
3090	Acid Phosphate, ...	Geo. S. Miller, Mifflinville, ...
	VIRGINIA CAROLINA CHEMICAL CO., BALTIMORE, MD., for resale by the RASIN MONUMENTAL CO.	
3334	V. C. C. Co's. 16% Acid Phosphate, ...	J. A. Weller, Edinburg, R. F. D., ...
	ROBERT A. WOOLDRIDGE CO., BALTIMORE, MD.	
2114	Wooldridge's Florida Acid Phosphate, ...	Schlegel, Adam & Co., Fleetwood, ...
	YORK CHEMICAL WORKS, YORK, PA.	
2222	†Dempwolf's Super Phosphate, ...	A. P. Lippy, Littlestown, ...
3271		Preston Bros., Canton, ...

†Composite sample.

PHOSPHATE—Continued.

Moisture in 100 pounds.	Phosphoric acid in 100 Pounds.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
	Available.		Insoluble.	Total			
	Found.	Guaranteed.		Found.	Guaranteed.		
9.33	16.11	16.00	.24	*16.35	17.00	13.89	13.75
3.73	14.88	14.00	1.25	16.13	.....	13.34	13.00 14.00 13.00
9.88	14.20	14.00	.34	*14.54	15.00	12.66	.....
8.29	16.70	16.00	1.28	17.98	16.50	14.54	14.00 15.00
6.81	15.02	14.00	.15	15.17	14.50	13.14	19.50
8.93	13.90	14.00	.79	*14.69	15.00	12.57	14.00
5.43	17.70	16.00	1.58	19.28	17.00	15.27	16.00
8.81	15.44	14.00	1.07	16.51	15.00	13.65	.....
8.92	16.67	14.00	.47	17.14	14.50	14.34	15.00 13.85

*Constituents falls below guaranty.

GROUND BONE

Furnishing Phosphoric

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK.	
2575	†Fine Ground Bone,	H. F. Gump & Son., Everett,
2536		C. B. Farr, North East,
2787		L. T. Harris, 2115 N. 2nd St., Harrisburg,
3394	Pure Raw Bone,	B. F. Horting, Newport,
	ARMOUR'S FERTILIZER WORKS, INC., CHICAGO, ILL.	
2635	†Bone Meal,	H. C. Berrits Sons, Somerset,
2079		S. S. Bryan, Titusville,
3203		Geo. C. & F. A. Brooks, Wellsboro,
	BALTIMORE PULVERIZING CO., BALTIMORE, MD.	
3254	Raw Bone,	J. G. Washburne, Millville,
	BERG COMPANY, PHILADELPHIA, PA.	
2187	Berg's Raw Bone Fine,	Edw. F. Bracken, Paoll,
	BAUGH & SONS CO., PHILADELPHIA, PA.	
2139	Baugh's Pure Steamed Bone,	Jas. G. Kauffman, Dauberville,
2348	†Baugh's Raw Bone Meal warranted pure,	John F. Stier, Johnsonville,
2161		Henry Palmer, Langhorne,
2926		A. W. Schoener, Womelsdorf,
	BOWKER FERTILIZER CO., NEW YORK.	
2902	†Bowker's Fresh Ground Bone,	Youngwood Lumber & Supply Co., Youngwood.
3061		Jacob Yoder, Hegins,
	EUREKA CHEMICAL CO., BALTIMORE, MD.	
3024	Eureka Ground Bone,	C. C. Davis, Greensburg,
	GRIFFITH & BOYD CO., BALTIMORE, MD.	
2712	†Pure Fine Ground Bone Meal,	D. W. & H. W. Grove, Catawissa,
2674		Milhons Bros., Mendenhall,
2949	†Griffith & Boyd Co.'s Soft Ground Bone Meal.	Willis C. Herr, Strausburg,
2947		Willis C. Herr, Strausburg,
3044		J. C. Leib & Co., Stewartstown,
	S. M. HESS & BRO., PHILADELPHIA, PA.	
2257	High Grade Ground Bone,	Austin Hemminger, Holsopple, R. No. 1,
	THE HUBBARD FERTILIZER CO., BALTIMORE, MD.	
3540	Hubbard's Pure Bone Meal,	J. L. McLain & Co., Tyrone,
	INTERNATIONAL AGRICULTURAL CORPORATION, BUFFALO, FERTILIZER WORKS, BUFFALO, N. Y.	
2073	Buffalo Bone Meal,	H. B. Edwards, Titusville,
	MARTIN FERTILIZER CO., PHILADELPHIA, PA.	
2451	Pure Ground Bone,	W. S. Kerstetter, Secry., Sunbury, R. No. 2,
2661	†Martin's Pure Raw Bone Meal,	Passmore & Co., Nottingham,
3364		Diehl, Omwake & Diehl, Chambersburg,
	MILLER FERTILIZER CO., BALTIMORE, MD.	
3314	†Ground Bone,	M. T. Harkins, Hickory Hill,
	PUGH & LYONS, OXFORD, PA.	
2653	Pugh & Lyons Ground Raw Bone,	C. R. Kirk & Co., Oxford,

†Composite sample.

FERTILIZERS.

Acid and Nitrogen.

Moisture in 100 pounds.	Mechanical Analysis.		Chemical Analysis.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of delivery.
	Diameter less than 1-50 inch. "Fine."	Diameter greater than 1-50 inch. "Coarse."	Phosphoric Acid.		Nitrogen.			
			Found.	Guaranteed.	Found.	Guaranteed.		
3.01	55	45	24.64	22.88	2.67	2.47	31.48	33.00 32.00 .....
6.95	46	54	21.67	21.51	3.95	3.70	33.67	34.50
.....	51	49	23.50	22.00	2.65	2.47	30.37	32.00 36.00 36.00
3.98	49	51	24.32	22.00	2.54	2.46	30.42	30.00
6.21	47	53	22.40	22.00	3.83	3.00	33.91	34.00
8.09	90	10	28.66	25.00	1.78	1.65	33.84	25.00
6.74	55	45	21.46	21.50	4.09	3.70	34.75	33.00 36.00 33.00
.....	51	49	24.07	22.88	2.73	2.47	31.15	40.00 .....
4.92	50	50	15.68	14.00	2.78	2.47	25.27	33.00
.....	49	51	*19.32	22.00	3.72	3.30	31.24	32.00 34.00 34.00
.....	70	30	12.84	11.00	2.48	2.50	22.92	29.00 28.00
6.55	47	53	22.48	20.61	3.94	3.29	34.35	30.00
3.21	75	25	24.58	22.50	*3.49	3.69	36.27	40.00
4.43	67	33	24.16	22.00	2.38	2.50	30.99	40.00
3.38	62	38	24.68	22.90	2.54	1.65	31.64	30.00
.....	36	64	24.13	21.00	3.61	3.70	33.37	35.00 35.00
4.84	60	40	15.75	13.74	2.59	2.47	25.03	34.00
6.53	14	86	22.90	20.00	4.08	3.29	32.73	34.50

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.
	F. S. ROYSTER GUANO CO., BALTIMORE, MD.	
3128	Royster's Fine Ground Bone Meal, ...	Harvey Spencer, Cochranville, ...
2428	†Royster's Pure Raw Bone Meal, ...	Wm. Biller, Patton, ...
2253		Blough & Yoder, Holsopple, ...
2894		Eicher & Graft, Scottdale, ...
	SCHAAL SHELDON FERTILIZER CO., BUFFALO, N. Y.	
2088	High Grade Ground Bone, ...	Brooklyn Milling Co., Spartansburg, ...
	SWIFT & COMPANY, CHICAGO, ILL.	
2530	Swift's Pure Ground Beef Bone, ...	W. P. Rouse & Son, North East, ...
	F. W. TUNNELL & CO., PHILADELPHIA, PA.	
2153	Pure Ground Bone, ...	Edw. Brinton & Sons, West Chester, ...

†Composite sample.

FERTILIZERS—Continued.

Moisture in 100 pounds.	Mechanical Analysis.		Chemical Anaylsis.				Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of delivery.
	Diameter less than 1-50 inch. "Fine."	Diameter greater than 1-50 inch. "Coarse."	Phosphoric Acid.		Nitrogen.			
			Found.	Guaranteed.	Found.	Guaranteed.		
.....	57	43	24.07	22.90	2.79	2.47	31.77	28.00 33.75
6.59	42	58	23.99	21.50	3.99	3.70	35.24	36.00 38.00
4.94	59	41	21.05	20.59	3.30	3.29	31.63	35.00
3.41	73	27	*25.81	27.00	2.26	2.05	32.08	30.75
3.68	61	39	23.76	23.00	2.92	2.46	32.22	33.00

*Constituent falls below guaranty.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	ALPHANO HUMUS CO., WHITEHALL BLDG., NEW YORK.		
2952	Alphano Humus,	Willis C. Herr, Strasburg,	.....
	AMERICAN AGRICULTURAL CHEMICAL CO., NEW YORK.		
2788	Ground Tankage (9-20),	L. F. Harris, 2115 N. 2nd St., Harrisburg.	7.33
3595	High Grade Dried Blood,	J. A. Duck, Middleburg,	6.96
2324	†Nitrate of Soda,	N. R. Yost, Myerstown,	.60
2040	†Nitrate of Soda,	A. A. Schwalm, Secy., Hegins,	.60
2909	†Nitrate of Soda,	Wm. J. Johnston, Sinking Spring,	.60
	ARMOUR'S FERTILIZER WORKS, BALTIMORE, MD.		
2992	Ground Tankage,	Grove Store Co., West Milton,	7.48
2305	Nitrate of Soda,	Orwell Grange, Orwell,	1.47
	ASSOCIATED CHEMICAL CO., HAGERSTOWN, MD.		
3598	Nitrate of Soda,	Jno. N. Bathgate, State College,	.90
	BAUGH & SONS CO., PHILADELPHIA, PA.		
2195	†Nitrate of Soda,	Geo. W. Holtzinger, Red Lion,	.87
2142	†Nitrate of Soda,	Jas. G. Kauffman, Dauberville,	.87
2412	†Nitrate of Soda,	Rautch & Swartle, Clearfield,	.87
	BOWKER FERTILIZER CO., BOSTON, MASS.		
2430	†Nitrate of Soda,	Alrain Hostetter, Johnstown R. 3,	1.09
3444	†Nitrate of Soda,	Murray & Co., Honesdale,	1.09
	CONSUMERS CHEMICAL CORPORATION, NEW YORK.		
2423	Nitrate of Soda,	Chas. Yaeckle, Patton,	.67
	FARMERS' FERTILIZER CO. OF AMERICA, PITTSBURGH, PA.		
2049	Available Phosphate Powder,	J. H. Lavery, Franklin,	.44
	FEDERAL CHEMICAL CO., COLUMBIA, TENN.		
3374	Daybreak Tennessee Brown Phosphate Rock.	J. W. King, York Springs,	.86
	GERMAN KALI WORKS, INC., NEW YORK.		
2962	Muriate of Potash,	H. E. Vanormer, Thompsontown,	.73
	LEBANON FERTILIZER WORKS, LEBANON, PA.		
2025	Nitrate of Soda,	Horace Kintzle, Pine Grove,	.81
	NITRATE AGENCIES CO., NEW YORK.		
2960	Dried Blood,	H. E. Vanormer, Thompsontown,	12.68
2954	†Nitrate of Soda,	The Law Co., Farmers Asso., Inc., Manheim, R. D. No. 1,	.76
2963	†Nitrate of Soda,	H. E. Vanormer, Thompsontown,	.76
	PATAPSCO GUANO CO., BALTIMORE, MD.		
3069	†Nitrate of Soda,	John Reese, Dallas,	1.32
3427	†Nitrate of Soda,	Summit Lumber Co., Clarks Summit,	1.32
	RASIN MONUMENTAL CO., BALTIMORE, MD.		
3190	9% Tankage,	Em. Boyer, Elizabethville,	5.04
2914	†Nitrate of Soda,	Seigfried & Schwoyer, Kempton,	1.03
3191	†Nitrate of Soda,	Em. Boyer, Elizabethville,	1.03
2671	High Grade Ground Fish,	E. H. Keen & Co., Parkersburg,	7.53

†Composite sample.

FERTILIZERS.

Phosphoric Acid in 100 Lbs.					Potash in 100 Lbs.				Nitrogen in 100 Lbs.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
Available.			Total.				Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Water soluble.	Available.	Inactive—Insoluble.	Found.	Guaranteed.		
....	.....	.....	1.31	.50	.....	.....	.....	.50	.10	.67	¶ .99	1.66	1.25	.....	20.00
....	.....	.....	10.55	9.15	.....	.....	.....	.....	1.65	6.07	‡1.87	7.94	7.41	44.50	.....
....	... .	.....	.....	.....	.....	.....	.....	.....	1.45	7.23	‡2.66	9.89	9.87	48.34	.....
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.44	15.00	49.35	50.00 ....
....	.....	.....	12.58	6.87	.....	.....	.....	.....	1.72	5.84	‡2.05	7.89	7.40	46.02	.....
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.68	14.81	50.10	45.00
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.24	15.00	48.75	.....
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.34	15.23	49.05	48.00 51.00 60.00
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.70	15.00	50.10	57.50 55.00
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.54	14.82	49.65	50.00
*3.62	4.00	.....	5.34	5.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.00
....	.....	.....	28.97	29.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.00
....	.....	.....	.....	.....	52.19	.....	52.19	48.00	.....	.....	.....	.....	.....	91.74	.....
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.70	15.67	50.10	45.00
....	.....	.....	.....	.....	.....	.....	.....	.....	4.21	10.59	‡2.55	13.14	13.16	63.16	.....
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16.22	15.00	51.60	48.00 .....
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.77	15.00	50.25	49.00 50.00
....	.....	.....	9.24	.....	.....	.....	.....	.....	2.37	5.61	‡1.51	*7.12	7.41	39.94	38.00
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.34	14.82	49.05	52.00
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45.00
....	.....	.....	.....	.....	.....	.....	.....	.....	1.20	6.87	‡2.29	9.16	8.23	46.75	49.00
....	.....	.....	7.42	.....	.....	.....	.....	.....							

*Constituents fall below guaranty.

† § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive. ‡=2-5 or less; §=2-5 to 3-5; ¶=3-5 or more.

Sample number.	Manufacturer and Brand.	From Whom Sample Was Taken.	Moisture in 100 pounds.
	SWIFT & CO., BALTIMORE, MD.		
2515	Tankage, ...	Chas. McDowell, Mansfield, ...	6.10
	I. P. THOMAS & SONS CO., PHILADELPHIA, PA.		
2010	Nitrate of Soda, ...	Oscar Ramer, Pitman, R. No. 2, ..	.52
	YORK CHEMICAL WORKS, YORK, PA.		
2239	Dempwolfs High Grade Tankage, ...	Farmers Cooperative Assn., Dover,	4.61

†Composite sample.

LIZERS—Continued.

Phosphoric Acid in 100 Lbs.					Potash in 100 Lbs.				Nitrogen in 100 Lbs.					Computed commercial value of 2,000 pounds at Department rating.	Selling price of 2,000 pounds at point of selection.
Available.							Total.					Total.			
Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Present as muriate.	Present as sulphate.	Found.	Guaranteed.	Water soluble.	Available.	Inactive—Insoluble.	Found.	Guaranteed.		
....	.....	.....	10.59	.....	.....	.....	.....	.....	1.82	4.25	‡1.54	*5.79	8.10	35.77	37.00
....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.46	15.00	49.35	51.00
....	.....	.....	*9.66	10.00	.....	.....	.....	.....	3.22	5.07	§1.35	*6.42	7.58	37.42	34.98

*Constituents falls below guaranty.
‡ § ¶ Characters indicating the proportion of insoluble nitrogen that is inactive: ‡=two-fifths or less; §=two-fifths to three-fifths; ¶=three-fifths or more.